ORGAN INSTITUTE QUARTERLY

VOLUME 7 NUMBER 2 SUMMER 1957

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ANDOVER . MASSACHUSETTS

TENTH ANNIVERSARY ISSUE

Music
Direct
4-19-58
Shortage

ORGAN FESTIVAL

The concert programs on the following pages will be performed by artists who have attended summer sessions of the Organ Institute. All of them are distinguishing themselves in their respective areas of activity and are becoming increasingly well known throughout the country. It is highly gratifying that a group of such talented and accomplished musicians should return to the Organ Institute to participate in the commemoration of its tenth anniversary.

The occasion of the tenth anniversary has elicited felicitations and congratulatory messages from many sources, which the Director and Board of Trustees wish to acknowledge with thanks. One of the most striking features of the first ten years of operations has been the caliber of the people who have been attracted to the Organ Institute. Its "alumni" are, both personally and musically, outstanding individuals. And it is a source of the greatest satisfaction that our faculty has included such distinguished American organists as E. Power Biggs, Catherine Crozier, Arthur Howes, Russell Hancock Miles, Robert Noehren, Arthur Poister, Carl Weinrich, and Ernest White, and the eminent Europeans, the late Fritz Heitmann, André Marchal, and Finn Videro, whose concerts and master classes have formed the principal part of our curriculum. Equally renowned in their own fields, Olaf Christiansen, E. W. Doty, Rowland W. Dunham, Arthur E. Hall, Agi Jambor, Ifor Jones, Homer G. Mowe, and Alfred Nash Patterson have also added to the stature of the Organ Institute.

Organbuilders have also contributed to the success of these years. The Andover Organ Company, the Estey Organ Corporation, Hemmersam of Copenhagen, D. A. Flentrop of Zaandam, Walcker of Ludwigsburg, the makers of Conn, Baldwin, Wurlitzer, and Hammond electronic instruments have all installed practice organs at Andover for use during our sessions, and we are grateful for their contribution.

Another gratifying aspect of this tenth anniversary is the long record of enthusiastic and sympathetic cooperation given to the Organ Institute by institutions and individuals. From the administration and staff of Phillips Academy, out through the twenty-eight other schools and churches in this area whose organs and facilities have been made available to us, there has been a uniform cordiality in all relations and arrangements that is heartwarming.

Best of all, however, has been the response to our offerings on the part of the American organ profession. The successful organ teachers who have studied here have sent their most talented pupils to follow in their footsteps. We take great pride in the presentation of this series of concerts by artists who have received a part of their instruction, and perhaps some inspiration, at the Organ Institute.

Organ Institute Quarterly Volume 7, Number 2, Summer 1957.

EDITOR: Arthur Howes

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(Entered as second class matter at Andover, Massachusetts)

Organ Festival

THURSDAY, AUGUST 8, 1957, at 8:30 P. M.

ADOLPH TEICHERT

Harpsichordist

COMPOSITIONS OF JOHANN SEBASTIAN BACH

Five Short Chorale Preludes for Manuals

Partita I in B flat major

- Prelude
- Allemande
- Corrente
- Sarabande
- Menuet I
- Menuet II
- Gigue

Fantasia in C minor

* * *

Three Preludes and Fugues from Volume II Well-Tempered Clavichord

- D minor
- G major
- F minor

Chromatic Fantasia and Fugue

Organ Festival

FRIDAY, AUGUST 9, 1957, at 8:30 P. M.

WILLIAM HAYS

BACH
Prelude and Fugue in G major

BUXTEHUDE
Prelude and Fugue in F sharp minor

FRANCK
Chorale in B minor

LANGLAIS
Hymne d'action de grâce "Te Deum"

* * *

KATHRYN ULVILDEN

COUPERIN
Chaconne in G minor

BACH
Chorale Preludes
Jesus, my Joy
Wither Shall I Flee?
We All Believe in One God (Giant Fugue)

LANGLAIS
Epilogue (from Hommange à Frescobaldi)

BACH
Fantasia and Fugue in G minor

Organ Festival

THURSDAY, AUGUST 15, 1957, at 8:30 P. M.

EDWARD HANSEN

WALTHER
Chorale Prelude
Praise Ye the Lord

PACHELBEL
Ciacona in D major

FIOCCO
Adagio

BACH
Prelude and Fugue in E flat major

BRAHMS
Chorale Prelude
O God, Thou Faithful God

ALAIN
Litanies

* * * *

EDGAR BILLUPS

ARNE
Flute Solo

BACH
Toccata in F major

MILHAUD
Neuf Preludes
I Modere
II Anime
III Vif
IV Modere
IX Vif

REGER
Fantasia on B A C H

Organ Festival

FRIDAY, AUGUST 16, 1957 at 8:30 P. M.

D. ROBERT SMITH

BUXTEHUDE
- Prelude, Fugue, and Chaconne in C major

HANDEL
- Concerto V
  - Larghetto
  - Allegro
  - Alla Siciliana
  - Presto

BACH
- Chorale Prelude
  - O Spotless Lamb of God

VAUGHAN-WILLIAMS
- Rhosymedre

FRANCK
- Chorale in A minor

* * *

DOUGLAS ELLIOTT

BACH
- Chorale Preludes from The Little Organ Book
  - In Thee Is Gladness
  - Blessed Jesus, at Thy Word
  - Let All Together Praise Our God
  - O Thou of God the Father
  - Lord God, Now Open Wide Thy Heaven
  - In dulci jubilo
- Chorale Prelude (from the Schübler Chorale Preludes)
  - Comest Thou Now, Jesus, From Heaven to Earth Beneath?
- Toccata in F major

JACOBI
- Prelude

DUPRE
- Variations on a Noel
  - Theme
  - Larghetto
  - Poco animato
  - Canon a l'octave
  - Vif
  - Vivace
  - Canon a la quarte et quinte
  - Vivace
  - Cantabile (Canon a la seconde)
  - Animé
  - Fugato et Finale

Organ Festival

SUNDAY, AUGUST 18, 1957, at 8:30 P. M.

THE FINE ARTS STRING ORCHESTRA

ARTHUR HOWES, conductor

LEONARD RAVER, organist

WARLOCK

Capriol Suite

Basse-Danse
Pavane
Tordion
Bransles
Pieds-en-l'air
Mattachins (Sword Dance)

MOZART

Divertimento in D major (K 136)

Allegro
Andante
Presto

Four Sonatas for Organ and Strings

Number 13 in C major (K 328)
Number 9 in F major (K 244)
Number 16 in G major (K 241)
Number 15 in C major (K 336)

IRELAND

Concertino Pastorale

Eclogue
Threnody
Toccata

POULENC

Concerto for Organ and Strings

Organ Festival

MONDAY, AUGUST 19, 1957, at 4:30 P. M.

Peabody House, Andover

AGI JAMBOR

Pianist

SCHUMANN

Carnival (Opus 9) Scenes migonnes sur quatre notes A S C H

Préambule
Pierrot
Arlequin
Valse noble
Eusebius
Florestan
Coquette
A S C H S C H A (Lettres dansantes)
Replique
Papillons
Chiarana
Chopin
Estrella
Reconnaissance
Pantalon et Colombine
Valse Allemande
Paganini
Aveu
Promenade
Pause
Marche des "Davidsbündler" contre les Philstine

CHOPIN

Four Impromptus

A flat major, opus 29
F sharp major, opus 36
G flat major, opus 51
C sharp minor, opus 66

Sonate in B flat minor, opus 35

Agitato
Scherzo
Marche funebre
Finale

Organ Festival

MONDAY, AUGUST 19, 1957, at 8:30 P. M.

WARREN HUTTON

BRUHNS
Prelude and Fugue in E minor

BACH
Chorale Preludes
My Soul Doth Magnify the Lord
Comest Thou Now, Jesus, From Heaven to Earth Beneath?
O Man, Bewail Thy Grievous Fall

HINDEMITH
Sonata I

MOZART
Fantasia (K 608)

* * *

WILL HEADLEE

BUXTEHUDE
Prelude and Fugue in G minor

BACH
Chorale Prelude
Glory to God in the Highest
Passacaglia and Fugue in C minor

BRAHMS
Fugue in A flat minor

BINGHAM
Rhythmic Trumpet

MESSIAEN
Dieu parmi nous (from La Nativité du Seigneur)

Organ Festival

TUESDAY, AUGUST 20, 1957, at 4:30 P. M.

Peabody House, Andover

CANTATAS by J. S. BACH

ARTHUR HOWES, Conductor

MABEL LEWIS, PRISCILLA WATSON,
JOSEPH McCALL, JAMES SMITH,
GLEN HAAGENSEN, Soloists

CANTATA NUMBER 140, "SLEEPERS, WAKE!"

Chorus	Sleeprs wake! for night is flying
Recitative for Tenor	He comes, the Bridegroom comes
Air for Soprano and Bass	I seek Thee, my Life
Chorale for Tenors	Zion hears her watchmen's voices
Recitative for Bass	Come, enter in with Me
Air for Soprano and Bass	My Friend is mine
Chorale	Glory now to Thee be given

CANTATA NUMBER 149, "LET SONGS OF REJOICING BE RAISED"

Chorus	Let songs of rejoicing be raised
Air for Bass	God, Whose power never faileth
Recitative for Alto	I will not fear a thousand deadly foes
Air for Soprano	God's bright angels never sleep
Recitative for Tenor	Almighty God, may this Thy tender love
Duet for Alto and Tenor	Be wakeful, ye heavenly watchmen
Chorale	My God, when Thou shalt call me home

Organ Festival

TUESDAY, AUGUST 20, 1957, at 8:30 P. M.

JERALD HAMILTON

SWEELINCK
Variations on "My Young Life Hath an End"

BACH
Prelude and Fugue in E flat major

BRAHMS
Chorale Preludes
My Heart Is Filled With Longing
Deck Thyself, My Soul, With Gladness
Blessed Are Ye Faithful Souls

DUPRÉ
Prelude and Fugue in G minor

* * *

JOYCE JONES

BACH
Prelude and Fugue in D major

LOEILLET
Aria and Giga

LANGLAIS
Improvisation (from Suite Médiévale)

LISZT
Fantasia and Fugue on "Ad nos, al salutarem undam"

Organ Festival

WEDNESDAY, AUGUST 21, 1957, at 4:30 P. M.

Peabody House, Andover

CANTATA NUMBER 63

"CHRISTIANS, GRAVE YE THIS GLAD DAY"

ARTHUR HOWES, Conductor

MABEL LEWIS, PRISCILLA WATSON,

JOSEPH McCALL, JAMES SMITH,

GLEN HAAGENSEN, Soloists,

Chorus	Christians, grave ye this glad day
Recitative for Alto	O holy day
Air for Soprano and Bass	Loving Father, grace abideth
Recitative for Tenor	This day will bring to Israel release
Air for Alto and Tenor	All that hath life now give praise to the Lord
Recitative for Bass	A thousandfold renew
Chorus	Father, may Thy Blessing fall on my heart

Organ Festival

WEDNESDAY, AUGUST 21, 1957, at 8:30 P. M.

KLAUS SPEER

BUXTEHUDE
- Prelude and Fugue in F sharp minor
- Choral Prelude
  - Man, Wilt Thou Lead a Blessed Life
- Fantasia on "How Brightly Shines the Morning Star"

LÜBECK
- Variations on "Let Us Now Praise God, the Lord"

BRUHNS
- Prelude and Fugue in E minor

BACH
- Chorale Preludes (from the Great Eighteen Chorale Preludes)
  - Lord Jesus Christ, Turn Thee to Us
  - To God on High Alone Be Praise

* * *

CLARENCE LEDBETTER

BORNEFELD
- Partita
  - We All Believe in One God

DISTLER
- Trio Sonata

MESSIAEN
- La Nativité du Seigneur
  - Les Mages
  - Dieu parmi nous

Organ Festival

THURSDAY, AUGUST 22, 1957, at 4:30 P. M.

Peabody House, Andover

CANTATAS by J. S. BACH

ARTHUR HOWES, Conductor

MABEL LEWIS, PRISCILLA WATSON
JOSEPH McCALL, JAMES SMITH,
GLEN HAAGENSEN, Soloists

CANTATA NUMBER 67, "HOLD IN AFFECTION JESUS CHRIST"

Chorus	Hold in affection Jesus Christ
Air for Tenor	My Savior now is risen
Recitative for Alto	Lord Jesus, Thou the sting of death hast drawn
Chorale	
Recitative for Alto	Come, all and hail this day of days
Air for Bass and Chorus	And yet, O Lord
Chorale	Peace be unto you
	Lord Christ, Thou art the Prince of Peace

CANTATA NUMBER 180
"RISE, O SOUL, THIS HAPPY MORNING"

Chorus	Rise, O soul, this happy morning
Air for Tenor	Rejoice, O soul
Recitative and Arioso for Soprano	How dear is this one sacrifice
Recitative for Alto	'Twixt fear and joy my spirit hovers
Air for Soprano	Sion, sing thy Savior's glory
Recitative for Bass	Lord, in the bread that here is broken
Chorale	Very Bread, sustain and feed us

Organ Festival

THURSDAY, AUGUST 22, 1957, at 8:30 P. M.

GRADY WILSON

BACH

Chorale Preludes

Kyrie, God, Holy Spirit (from The Catechism)

Come Now, Savior of the Gentiles

(from the Great Eighteen Chorale Preludes)

LISZT

Prelude and Fugue on B A C H

LANGLAIS

Arabesque sure les Flûtes

Dialogue sure les Mixtures

Epilogue (from Hommage à Frescobaldi)

SOWERBY

Requiescat in pace

EDMUNDSON

Gargoyles

* * *

GORDON WILSON

LANGLAIS

Suite Médiévale

Entreé

Elévation

Acclamations

BRAHMS

Chorale Prelude

My Heart is Filled With Longing

BACH

Chorale Prelude

We All Believe in One God (from The Catechism)

Sonata V

Allegro

HINDEMITH

Sonata I

MESSIAEN

Transports de joie (from L'Ascension)

Organ Festival

FRIDAY, AUGUST 23, 1957, at 4:30 P. M.

Peabody House, Andover

AGI JAMBOR

Pianist

COMPOSITIONS OF FRÉDÉRIC CHOPIN

Four Ballades

G minor, opus 23

F major, opus 38

A flat major, opus 47

F minor, opus 52

Sonate in B minor, opus 58

Allegro maestoso

Scherzo

Largo

Finale

Organ Festival

FRIDAY, AUGUST 23, 1957, at 8:30 P. M.

THE FINE ARTS STRING ORCHESTRA

ARTHUR HOWES, conductor
EDWARD HANSEN, organist

VIVALDI

Concerto in G minor
- Adagio - Allegro
- Largo
- Allegro

Sinfonia in B minor ("To the Holy Sepulcher")
- Adagio molto
- Allegro ma poco

Concerto in D minor
- Allegro non molto
- Largo
- Allegro

HANDEL

Concerto V for Organ and Orchestra
- Larghetto
- Allegro
- Alla Siciliana
- Presto

* * *

ARENSKY

Variations on a Theme by Tschaikovsky
- (Theme, seven variations, and coda)

HOLST

Saint Paul's Suite
- Jig
- Ostinato
- Intermezzo
- Finale (The Dargason)

DUPRÉ

Cortege et Litanie for Organ and Orchestra

ADOLPH TEICHERT — Mr. Teichert studied harpsichord with Wanda Landowska and Edith Weiss-Mann. He appeared as continuo harpsichordist with the Fine Arts String Orchestra in 1951 and as soloist with the same orchestra in 1954. He has also played with the Boyd Neill Orchestra in the performance of six Brandenburg concertos at the Stradford Ontario Shakespearian Festival and has been soloist at the Bach Festivals in London, Ontario. He stuudied organ with Ernest White, holds a master of sacred music degree from Union Theological Seminary, and is organist and choir director at the Chapel of the Incarnation, New York City. He attended the Organ Institute in 1950 and 1951.

WILLIAM HAYS — Mr. Hays, who is a teacher of organ, theory, and church music at Union College, Kentucky, graduated from the University of Arkansas, where he was an organ pupil of Kenneth Osborne (who also attended the Organ Institute). He was a teaching fellow at Indiana University where he studied with Oswald Ragatz and he was granted a master of music degree with distinction. Having been for three seasons a member of the French horn section of the Arkansas State Symphony, he won that organization's scholarship to the University of Arkansas. He attended the Organ Institute in 1956. There he made the acquaintance of André Marchal, with whom he will study in Paris next season.

KATHRYN ULVILDEN — Assistant professor of music at Luther College, Iowa, from which she holds a bachelor of arts degree, Miss Ulvilden has studied organ with Arthur B. Jennings at the University of Minnesota; Arild Sandvold, in Oslo, Norway; and Rolands Faicinelli, André Marchal, and Jean Langlais, in Paris. She attended Northwestern University, which awarded her a master of music degree, University of Kansas City, University of Oslo, and Ecole Normale, in Paris. She won a Fulbright award for study in Norway, and has taught organ at Lutheran church music institutes. She attended the Organ Institute in 1956.

EDGAR BILLUPS — Mr. Billups is preparing to spend a year studying with Helmut Walcha in Frankfort, Germany, under a Fulbright grant. He has studied with Dr. Austin C. Lovelace, formerly of North Carolina, of which state Mr. Billups is a native; Mildred Hendrix, of Duke University (who also has attended the Organ Institute); Dr. Jan P. Schinhan, of the University of North Carolina; and Arthur Poister, of Syracuse University, where Mr. Billups earned the bachelor of music degree. He attended the Organ Institute in 1951.

EDWARD HANSEN — Mr. Hansen is a graduate of the University of Washington, where he earned both a bachelor of music degree and studied with Walter Eichinger, who also has attended the Organ Institute. He is an associate of the American Guild of Organists and Dean of the Seatttle Chapter. He was a regional winner in 1953 of the American Guild of Organists Organ Competition. He attended the Organ Institute in 1951 and 1953.

D. ROBERT SMITH — Mr. Smith is the director of music at Bates College, Maine, and an Associate of the American Guild of Organists and state chairman of that organization. He holds a master of music degree from DePauw University and has served on the faculty of the College of Puget Sound, Washington. He studied organ with Dr. Van Denman Thompson, Marcel Dupré Charles Courboin, and Hugh Porter. He attended the Organ Institute in 1949, 1950, 1951, 1952, and 1956 and was a member of the group that made a study of European organs under the auspices of the Organ Institute in 1955.

DOUGLAS ELLIOTT — Mr. Elliott is a member of the faculty and Board of Examiners of the Royal Conservatory of Music at the University of Toronto, where he teaches organ and church music courses. He is organist-choirmaster at Saint Andrew's Presbyterian Church, in Toronto. Having graduated from the University of Toronto, he studied organ with Dr. Charles Peaker (who has also attended the Organ Institute) and composition with Healy Willan. Mr. Elliott attended the Organ Institute in 1948 and 1950.

LEONARD RAVER — Dr. Raver earned the bachelor of music degree from the College of Puget Sound where he was an organ student of D. Robert Smith (who has also attended the Organ Institute and is appearing in this concert series). Graduate study at Syracuse University with Arthur Poister led to the master of music degree. Dr. Raver is a member of the faculty of the School of Sacred Music, Union Theological Seminary, from which institution he recently received a doctor of sacred music degree, and is organist-choirmaster of All Angels' Episcopal Church, New York City. He is an Associate of the American Guild of Organists and holds life membership in Phi Mu Alpha Sinfonia. He attended the Organ Institute in 1950 and 1952.

WARREN HUTTON — Mr. Hutton is university organist and teacher of organ at the University of Alabama, and director of music at the First Methodist Church, Tuscaloosa, Alabama. An organ pupil of John H. Summers, Little Rock, Arkansas, he studied at Oberlin Conservatory with Arthur Poister and Fenner Douglass and was awarded the bachelor of music degree. Further study with Arthur Poister at Syracuse University earned for him the master of music degree. A series of twenty-six organ recitals recently recorded by Mr. Hutton is being broadcast nationally through the facilities of the National Association of Educational Broadcasters. He attended the Organ Institute in 1950 and 1955.

WILL HEADLEE — Mr. Headlee is instructor of organ at Syracuse University and director of music of the Evangelical Lutheran Church of Saint John and Saint Peter, in Syracuse. He studied organ with Dr. Jan P. Schinhan at the University of North Carolina and with Arthur Poister at Syracuse Univresity, where he was awarded the msater of music degree in organ. He was a finalist representing the southeastern region of the American Guild of Organists in the organ playing contest at the 1952 convention of the Guild in San Francisco. Mr. Headlee is a member of Phi Mu Alpha and an Associate of the American Guild of Organists. He attended the Organ Institute in 1951.

JERALD HAMILTON — Mr Hamilton is assistant professor of organ and theory at Washburn University, in Kansas, and organist-choirmaster of Grace Cathedral, Topeka. He attended the University of Kansas and was awarded both bachelor of music and master of music degrees. He is a member of Phi Mu Alpha. He held a Fulbright scholarship for study with André Marchal, in Paris, and has studied at the Royal School of Church Music, Croydon, England. He was organist for High Mass, Organ Mass, and Vespers at Sainte Eustache Church, Paris, on Easter Day 1955; organist for Organ Mass at Sainte Clotilde Church, Paris, on Whitsunday 1955; and organist for Choeur Philharmonique de Paris that same season. He attended the Organ Institute in 1956.

JOYCE JONES — Mrs. Jones won the bachelor of music with highest honors at the University of Texas. She also earned the master of music degree from the same institution, and holds a master of sacred music degree in composition from the Southwestern Baptist Theological Seminary, Texas. She is an Associate of the American Guild of Organists. She was a national first place winner in the organ division of the student auditions of the National Federation of Music Clubs, and won first place in the Julia Heusinger McCall piano contest and second place in the G. B. Dealey Memorial Award, Dallas. Mrs. Jones studied organ with Dr. E. W. Doty, Arden Whitacre, Claire Coci, and Dr. Nita Akin, and attended the Organ Institute in 1952 and 1955.

KLAUS SPEER — Dr. Speer is a graduate of the Academy for Church and School Music in Berlin. He was an organ pupil of the late Fritz Heitmann, to whose memory he is dedicating this recital. He has served on the faculties of Lincoln Memorial University, Tennessee, of Indiana University, and of Stephens College, Missouri. He has recently accepted a position at the University of Houston, where he will begin teaching this year. He is the author of articles that have appeared in the Organ Institute Quarterly and other music journals. He attended the Organ Institute in 1949.

CLARENCE LEDBETTER — When Clarence Ledbetter attended the Summer Session of the Organ Institute in 1950 he was facing an important decision. He had to choose between a career in medicine or in music. Shortly after the Summer Session he decided in favor of music and went to Berlin to study with the late Fritz Heitmann, who had taught at the Institute that year, and to whose memory Mr. Ledbetter is dedicating this concert. He now serves as organist and instructor at the Punahou Music School, in Honolulu. He attended the Organ Institute in 1950.

GORDON WILSON — GRADY WILSON — These identical twins showed their musical talent immediately when they began their piano study at the age of eleven. They graduated from the Birmingham Conservatory of Music, which awarded them the bachelor of music degrees after organ study with Minnie McNeill Carr (who also has attended the Organ Institute). They received bachelor of arts degrees from the Birmingham Southern College. They were winners of the Birmingham Music Club Award in Organ Auditions and were the Dixie District winners of the Federation of Music Clubs, in which Gordon won the national award. In addition to their concert appearances as organists they are becoming well known for their duo-piano concerts. They have given two such concerts at summer sessions of the Organ Institute, which they attended in 1955 and 1956.

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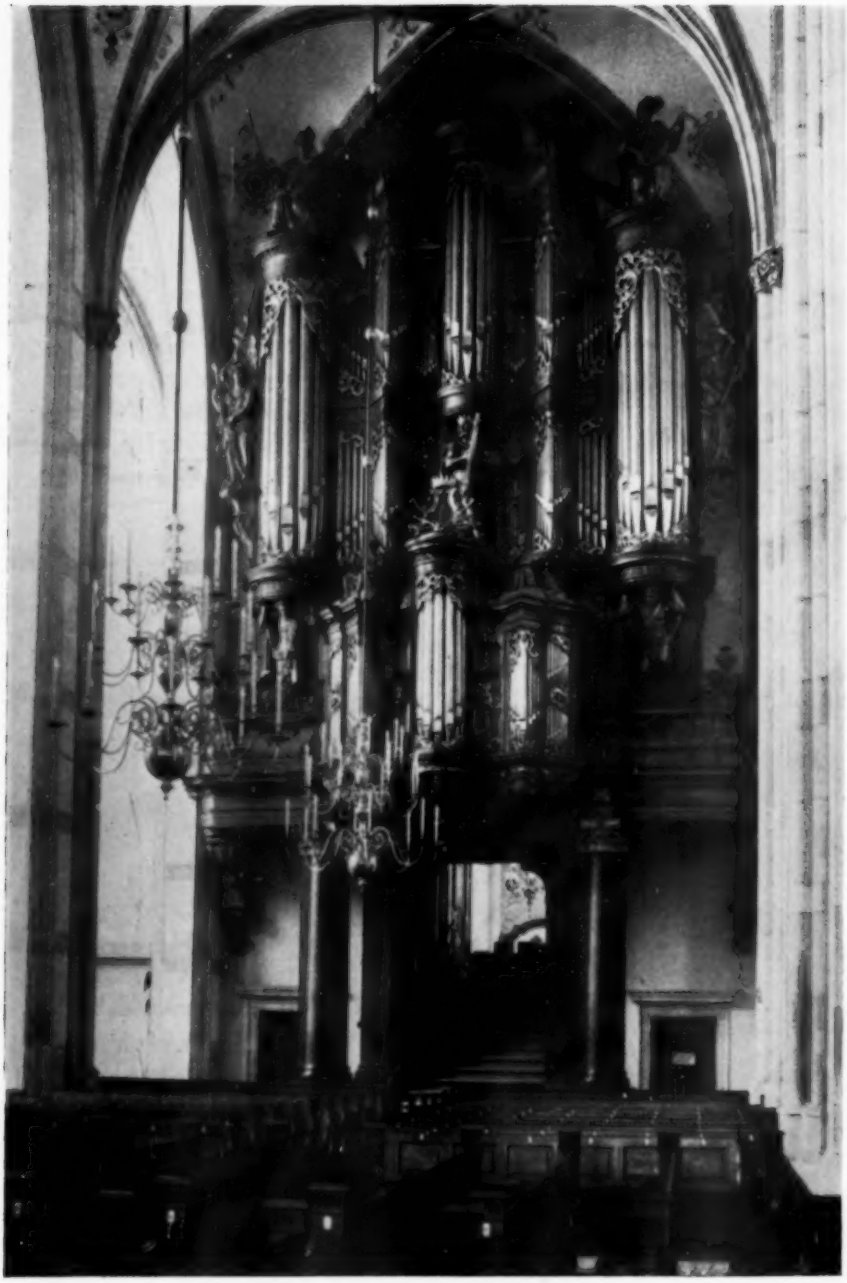

THE ORGAN IN SAINT MICHAEL'S CHURCH, ZWOLLE, RESTORED BY FLENTROP.

D. A. FLENTROP

THE SCHNITGER ORGAN IN THE GROTE KERK AT ZWOLLE

Just as in the present day it is often a problem to arrive at a choice of a good organbuilder, so was it in the case of the municipal officials[1] of Zwolle, when, in the beginning of the eighteenth century, they sought an organbuilder who was able to fulfill the exacting requirements for the building of an organ in Saint Michael's Church.

A letter from the famous organist, Vincent Lübeck, dated October 11, 1718, containing warm commendations for Arp Schnitger settled the matter. On December 23, 1718, the specifications for the building of a new organ were signed by Arp Schnitger. The letter from Lübeck, as well as the specifications of Arp Schnitger may still be found in the archives at Zwolle. The reader will find photographs of them on pages 32, 34 respectively.

The disposition by Arp Schnitger, according to the archives records, is to be found on page 36.

During the building of the organ, Arp Schnitger died and his two sons Johann George and Franz Casper carried out the work. It was according to their proposal that the new organ was enlarged by the addition of a fourth keyboard, a "Borstwerk" (in German, "Brustwerk").[2]

The disposition which they henceforth proposed read as follows:

8′ Fluit Gedeckt	1 1/2′ Quinta
4′ Prestant	II Tertiaan
4′ Roerfluit	III Mixtuur
3′ Spitsfluit (2 2/3′	8′ Fagot
2′ Principal	4′ Viola Di Gamba
2′ Speelfluit	

During the course of the building there were several more changes made, so after delivery a commission consisting of the organists Havercamp, Woordhouder, and Veldcamp presented in their report of September 3, 1721, the disposition below:

Hoofdwerk (topmost division)

16′ Prestant[3]	4′ Speelfluit	III Cymbel
16′ Quintadeen[3]	3′ Nasard	16′ Trompet
8′ Octaaf	2′ Superoctaaf	8′ Trompet
8′ Roerfluit	II Ruispijp	8′ Vox Humana
4′ Octaaf	VI Mixtuur	

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[1] In that day, the towns, not the church wardens, were the proprietors of the organs. Every important town wished to have the finest town hall, the finest church, and the finest organ in its area. Thus, Zwolle, being one of the most important of the Hanseatic cities, put great store by acquiring the very finest instrument possible.

[2] This is the division traditionally placed just above the music rack above the top keyboard, so that its action ran directly from the chest to the keys, making it both extremely light and sensitive to play.

[3] Combined from C to F♯.

SIDE VIEW OF ZWOLLE ORGAN, SHOWING SHALLOW DEPTH OF CASE.

Positief (below Hoofdwerk)

8′ Prestant	3′ Quint	II Tertiaan
8′ Holpijp	2′ Octaaf	V Scherp
6′ Prestantquint	2′ Woudfluit	8′ Viola Di Gamba
4′ Octaaf	1 ½′ Sifflet	4′ Trompet
4′ Holfluit		

Borstwerk (immediately above top keyboard)

8′ Fluitgedekt	2′ Octaaf	II Sesquialter
4′ Prestant	2′ Gemshoorn	IV Mixtuur
4′ Roerfluit	2′ Vlakfluit	8′ Dulciaan
3′ Spitsfluit	1 ½′ Quint	8′ Kromhoorn

Rugwerk (behind player, on gallery rail)

8′ Prestant	4′ Fluitdoes	IV Scherp
8′ Quindadeen	3′ Quintfluit	III Cymbel
8′ Fluitdoes	2′ Superoctaaf	16′ Fagot
4′ Octaaf	II Sesquialter	8′ Hobo

Pedal (in towers, to left and right)

16′ Prestant	III Ruispijp	8′ Trompet
16′ Subbas (metal pipes)	VIII Mixtuur	4′ Trompet
12′ Roerquint	32′ Basson	2′ Cornet
8′ Octaaf	16′ Bazuin	

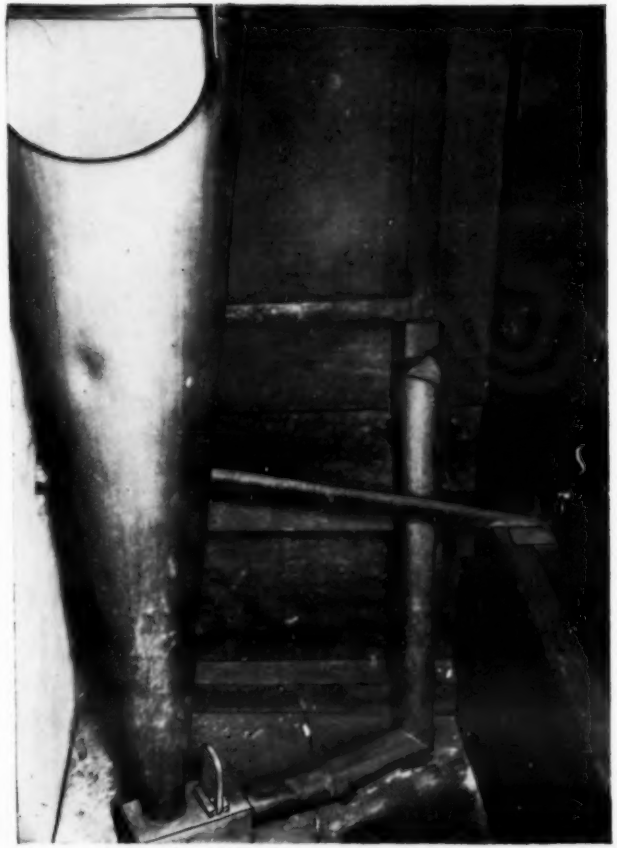
The original plan of Arp Schnitger totaled forty-six registers, disposed over three keyboards and pedal. The extended plan with a Borstwerk of eleven stops brought this up to a total of fifty-seven stops. Finally, the organ was completed with a total of sixty-three stops.

Because of these intervening enlargements and changes from the original plan proposed by Arp Schnitger, the question arises whether they might point to part of the reason for the fact that the tuning of the organ is approximately one tone higher than normal.

The total height of the organ is very closely related to the number of divisions and to the pitch. If the organ had actually been built according to the plan of Arp Schnitger, then, with normal pitch, it would have had exactly the same height as the present organ, with Borstwerk and with the pitch C one tone above normal.

In consideration of the height of the church, it was not possible to make the organ case higher than it now is. An extra height of 3′ 4″ would have been required for the Borstwerk, if carried out in accordance with the original plan. The higher pitch provides a saving of height amounting to 3′ 4″.

The closeness of these measurements shows quite obviously that, in the restoration which has since taken place (1953–1955), it would have been impossible to bring the organ to normal pitch unless the Borstwerk were removed and the construction of the front as well as the entire case were enlarged (and thus seriously interfered with) in consequence, or unless the organ were made 3′ 4″ higher. This last possibility would have entailed not only a very encroaching and unpermissible change in the case, but at the same time would have required that the organ be made higher than the interior height of the church allowed. The way in which a previous generation had endeavored to bring the organ to normal pitch will be dealt with in the following explanation.



PHOTOGRAPH B, SHOWING C AND C♯ PIPES PLACED BESIDE MANUAL CHEST AND WIND TUBES CONDUCTING WIND FROM CHEST TO PIPES.

PHOTOGRAPH A (LEFT), SHOWING SPECIAL VALVE TO REGULATE WIND SUPPLY FOR LOW CC PIPE, WHICH WAS SCARCELY NECESSARY SINCE THIS PIPE WAS SO FAR AWAY FROM THE CHEST THAT IT NEVER RECEIVED ENOUGH WIND.

In making the plans for the restoration, a serious attempt to retain this normal pitch was made, but this turned out to be impossible. Why was it not possible? Before going into this, let me ask the reader to look at photographs A and B, to see how this problem was met in the preceding century. In photograph A, you see the foot of the low C of 16′ Prestant.

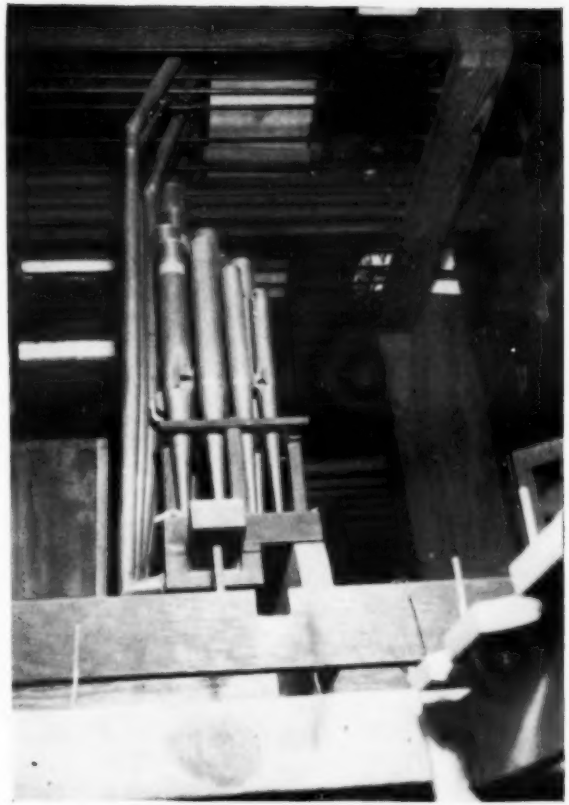
In front of the Pedal towers stands the 16′ Prestant, beginning with the pitch great D. With a change to normal pitch, these pipes should be lengthened, but this was not possible, due to lack of height in the organ case; in this situation, the organ case height was determined by the height of the church building. In addition, with the lengthening of the pipes, the relative scale becomes narrower, and because of this, the sound is unfavorably altered.

It was hoped to remedy the situation by making the addition of the two largest pipes, C and C♯. Since there was nowhere in the organ any place for these pipes, they were placed in the small walkway behind the organ. Nevertheless, the wind supply for these two pipes must find a place in connection with the slider of the 16′ Prestant, which stands on the front of the chest, directly behind the case front. Because of space limitations, it was not possible to route these wind conductors directly through to the pipes standing back of the organ; the conductor comes from the chest, across the front and back the entire length of the case and from there to the still lower walkway, on which the pipes are placed. How these pipes, with such a long wind conductor interrupted by so many bends, must have spoken can only be imagined! It is more or less ironic (for the organbuilder who did this) that just in front of the pipe, there is even a little valve for regulating the wind supply. There must not have been much regulating to do, for there was certainly always too little wind, and the opening of the valve didn't produce a greater supply! Now, one can be critical of such a way of doing things—with such a long conductor and with pipes in such an unhappy location from the acoustic point of view; no better place was to be found in the whole organ, nonetheless.

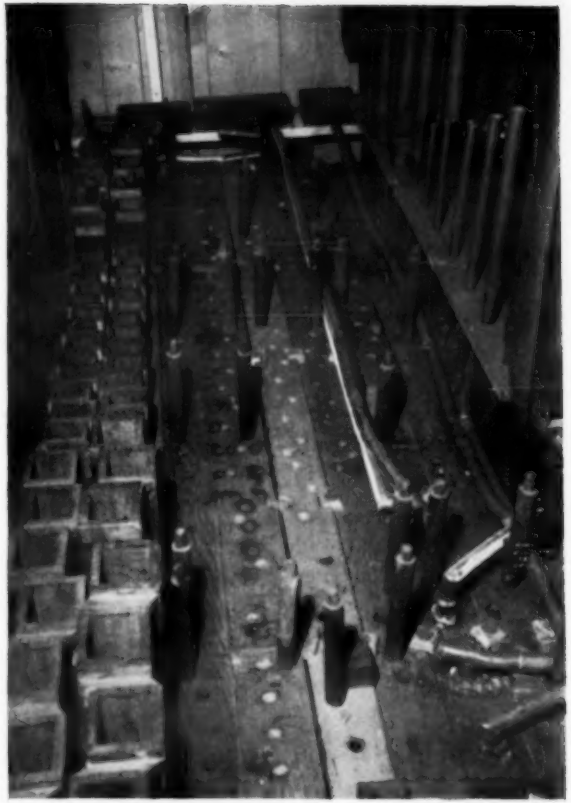
In photograph B, you may see the attempt to find a place, on one of the manual wind chests, for C and C♯. For many registers on a given chest this wasn't possible at all. With great difficulty, it was possible perhaps above or next to the chest, but then there were so many pipes so close together that a free, unobstructed speech of the pipes was no longer possible.

Next to this visible burden of lack of space, came still another, perhaps more important, problem. In the course of inspecting the tone channels in the chests, it appeared, that they were barely able to supply adequate wind of the right pressure for the original disposition at the original pitch. A lowering of the pitch would entail, as a consequence, new wind chests with larger tone channels. But for such new wind chests, more space would be needed than the organ case provided.

Above, I have recounted the earnest attempt that was made to lower the original pitch by one tone, just as there was, from the beginning, an effort by the commission appointed by the Zwolle church officials. The commission consisted of Dr. Anthon Van Der Horst, Adriaan Schuurman, George Stam, and myself; its aim was to do justice as completely as possible to the true worth of the Schnitger organ. Thus, an extremely efficient and careful procedure was called for, rather than a routine one, in order to make the best informed recommendation possible.



PHOTOGRAPH C, SHOWING CORNET AND ENDS OF LONG CONDUCTORS.



PHOTOGRAPH D, SHOWING LONG CONDUCTORS TO POSITION OF ADDED BASS PIPES.

Before the formation of the recommendation was begun, the whole organ was dismantled. The pipes were sorted out and put up on racks, so that they could be gone over exactly, the scales laid out on scale paper, all inscriptions examined by daylight, in short, everything together which was necessary in order to find out precisely what had happened to the pipework and what was the best thing to do in order to return it to its original state.

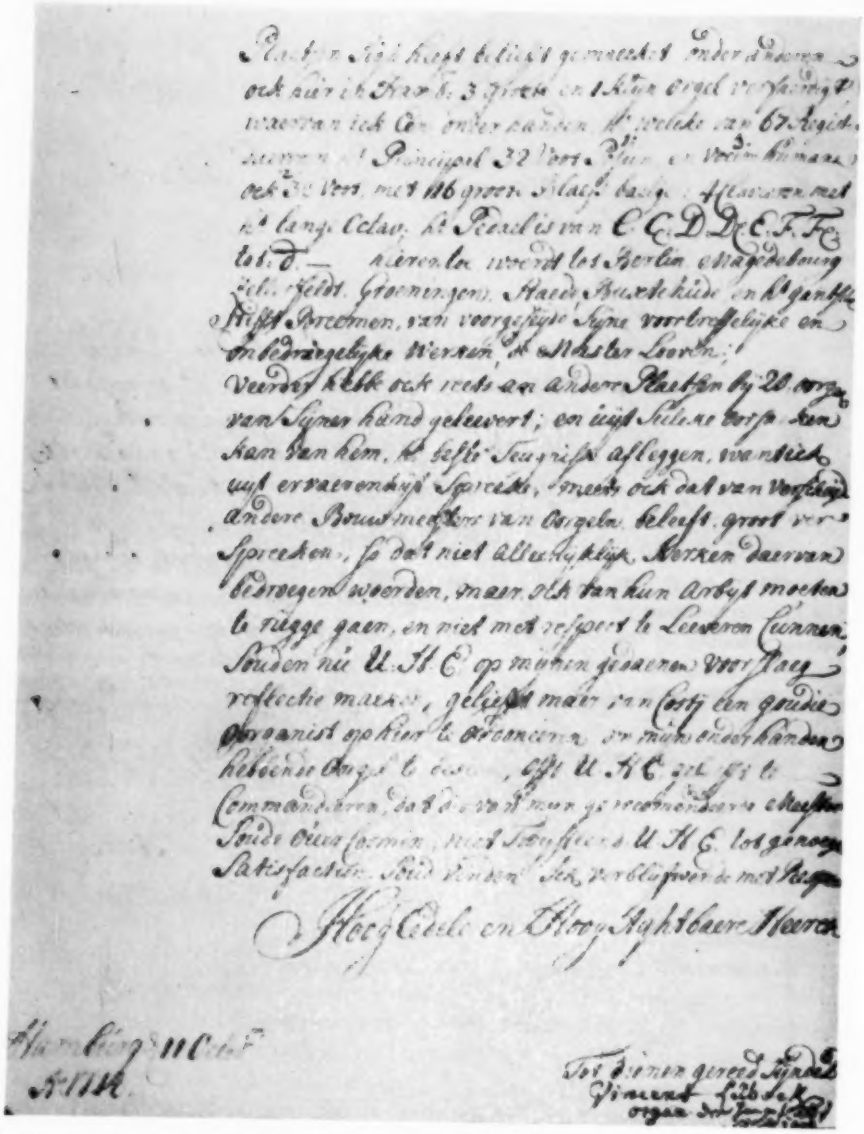
When the pipes were removed from the organ, the wind chests were opened and measured. From these measurements, the capacity of the chests could be determined; from the information learned from the pipes, scales for new pipes, which might need to be made, could be determined; from the scales, wind requirements for the pipes could then be figured. By these means it was also possible to determine the size of the chest valves, and from this to reconstruct the action, so that the characteristically light action, of which Joachim Hess wrote in 1774, "so easy was it to play, that all four keyboards could be employed coupled together," might once more be possible. This great ease of playing was, however, lost, because the understanding of the inviolable unity of the organ did not exist in the last century or in the first half of the present one.

The pitch had been lowered by a tone, the disposition had been altered so that registers requiring small amounts of wind were replaced by registers using a great deal of wind. The tone, in some cases the scales also, had been changed, usually bringing a need for more wind at the same time. What was the inevitable result of this? There was an attempt to increase the amount of wind by opening the valves wider. This was accomplished, on the one hand by giving the keys a deeper fall and on the other, by changing the leverage between the keys and pipe valves. However, the result was that nothing remained of the former light action. Finally, because there was absolutely no more room above the chest of the Hoofdwerk, there was an attempt to make a connection under the channel boards and to fit conductors underneath the Hoofdwerk chest and to connect to the far ends of these the pipe feet for a four-rank Cornet. There was not enough wind, and it was then determined to construct a second valve chest nearby. The result of this was that the touch became so heavy and the keyfall so deep, that only a player with unusual muscular strength could depress the keys far enough to open both the valves.

Photograph C gives a look at the manner in which this Cornet was connected, while above may be seen the thin and sagging rollers which form the connection between the original and new adjacent valve chest.

Photographs D and E give a mild example of the maze of conductors necessitated by the replacing of registers with small pipes by those with larger pipes. When, with the normal number of holes in the chest, no place was to be found, another location, often involving the greatest difficulty, was eventually found. Whether the pipe spoke well or whether the long wind conductor (with its narrow diameter due to space limitations) could supply sufficient wind, there was not very much that could be done. The main idea was that any register which satisfied the needs of the time was added, even if this was at the expense of the register itself, or even at the expense of the whole instrument as a complete entity.

Until now, I have spoken only of the changes made in the nineteenth century. The twentieth century was still worse. When, on the chests, beside, beneath, or be-



VINCENT LÜBECK'S SIGNATURE MAY BE CLEARLY DISCERNED AT AHE END OF THIS LETTER RECOMMENDING ARP SCHNITGER FOR THE BUILDING OF THE ZWOLLE ORGAN.

hind them, there was at last no more space, someone found space underneath the Pedal towers, even inside a completely closed case. Here, someone placed a 10 2/3′ Quint, as an expansion of the Pedal. Because of the great distance, direct connection with the Pedal chest by means of wind conductors was impossible. This register was placed on a pneumatic chest, which spoke very slowly. The tone came so noticeably late, that there was no possibility of the pipes sounding well in the church.

The action to the Pedal chests was thus so spoiled, through the tampering with the trackers and leverage, depth of keyfall, et cetera, that finally it was advised (perhaps because it was at that time fashionable to do everything with electricity) to operate the Pedal action electrically.

This still was not enough, and in the twentieth century, the old oak valves were replaced with new valves of conifer wood and steel springs, instead of copper, causing a new stiffening of the action. Besides this, someone came forward with the idea of equipping the Rugwerk with a swell box. In order to accomplish this, the Rugwerk case, already very deep, was enlarged at the back, with the following results: an unfavorable acoustical form, less space for the organist; the wind chest was moved, causing the wind supply going into the chest to be crowded. The wind for the Rugwerk then varied about 100 percent! It can well be imagined that after all of these alterations the organ neither sounded well nor was easy to play. The fault was not Schnitger's but arose from the complete lack of understanding and sympathy of later builders who worked on the organ.

When the church officials authorized the beginning of the restoration in 1945, the disposition, because of numerous alterations and re-alterations perhaps well intentioned but completely misguided, read as follows:

Hoofdwerk

16′ Prestant	4′ Speelfluit	III—V Mixtuur
16′ Bourdon	4′ Fl. Amabile	16′ Trompet
8′ Octaaf	3′ Nasard	8′ Trompet
8′ Roerfluit	2′ Octaaf	4′ Trompet
4′ Octaaf	II Ruispijp	I—IV Cornet

Positief

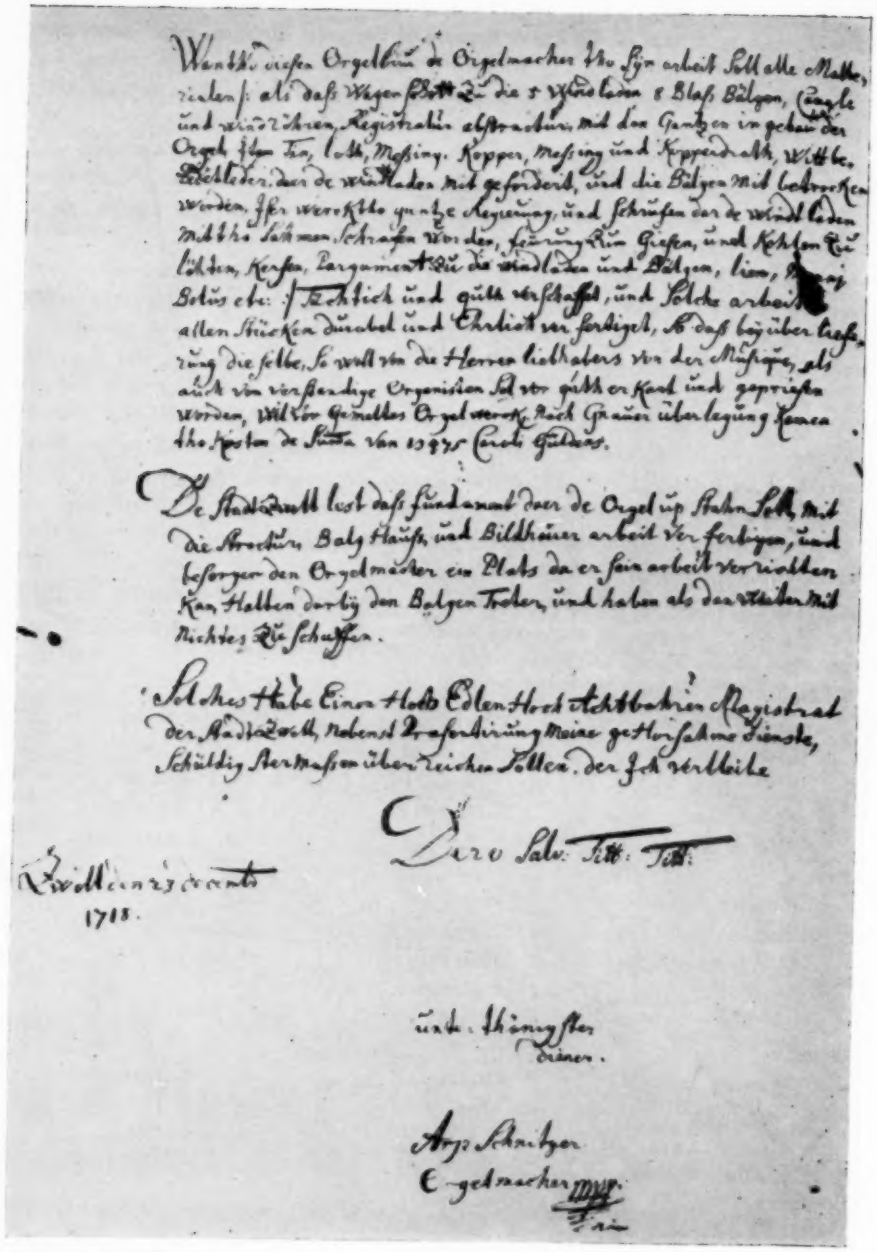
8′ Prestant	4′ Octaaf	III Carillon
8′ Bourdon	4′ Holpijp	8′ Trompet
8′ Fl. Travers (treble)	3′ Quint	8′ Klarinet
8′ Viola	2′ Woudfluit	
8′ Aeoline	1′ Flageolet	

Rugwerk

8′ Prestant	4′ Octaaf	16′ Bassethoorn
8′ Roerfluit	4′ Fluit	8′ Hobo
8′ Holpijp	2′ Octaaf	8′ Vox Humana
8′ Quintadeen	2′ Fluit	

Borstwerk

8′ Fluit Gedekt	4′ Salicionaal	1 ½′ Quint
8′ Holfluit (treble)	3′ Quintfluit	Mixtuur
4′ Prestant	2′ Prestant	8′ Fagot
4′ Roerfluit	2′ Gemshoorn	8′ Dulciaan



THE CONDITIONS AND SPECIFICATIONS OF ARP SCHNITGER'S PROPOSAL TO THE TOWN OF ZWOLLE, SIGNED BY HIM.

Pedal

16′ Prestant	8′ Violon	16′ Bazuin
16′ Subbas	8′ Holpijp	8′ Trombone
10 2/3′ Quintbas	4′ Octaaf	8′ Trompet
8′ Octaaf	16′ Basson	4′ Cornet

Nevertheless, even in this chaos enough of the original Schnitger pipework remained to make possible the accurate computation of scales for missing pipework and for new pipes that had to be made. Finally, after detailed deliberations by the government's commission for organbuilding and by the Zwolle commission, it was decided to restore the organ in its original pitch and with the following disposition (in which the 8′ Viola was the only register from the preceding century which it was felt justifiable to retain):

Hoofdwerk

16′ Prestant	4′ Speelfluit	VI Mixtuur
16′ Quintadena	3′ Nasaat	16′ Trompet
8′ Octaaf	2′ Superoctaaf	8′ Trompet
8′ Roerfluit	III Cimbel	8′ Vox Humana
4′ Octaaf	II Ruispijp	

Bovenpositief

8′ Prestant	4′ Holfluit	II Tertiaan
8′ Holpijp	3′ Quinta	V Scherp
8′ Viola	2′ Superoctaaf	8′ Viool Di Gamba
6′ Quinta	2′ Woudfluit	4′ Trompet
4′ Octaaf	1 ½′ Sifflet	

Rugwerk

8′ Prestant	4′ Fluit	IV Scherp
8′ Quintadena	3′ Quintfluit	III Cimbel
8′ Roerfluit	2′ Superoctaaf	16′ Fagot
4′ Octaaf	II Sesquialtera	8′ Schalmei

Borstwerk

8′ Fluitgedekt	2′ Superoctaaf	II Sexquialtera
4′ Prestant	2′ Gemshoorn	IV Mixtuur
4′ Roerfluit	1 ½′ Quintanus	8′ Dulciaan
3′ Spitsfluit	1′ Nachthoorn	8′ Regaal

Pedal

16′ Prestant	4′ Superoctaaf	16′ Bazuin
16′ Subbas	2′ Vlakfluit	8′ Trompet
8′ Octaaf	VIII Mixtuur	4′ Trompet
8′ Holpijp	32′ Fagot	2′ Cornet

In the following portion of this article, I will go into some details to explain the way in which the restoration was carried out. To that end, I will go over the different components of the organ one by one, beginning with the wind supply.

Wind Supply

Because of various unworkmanlike alterations of the wind conductors, the wind pressure was sadly regulated. The following wind pressures were intended originally:

Pedal: 100mm. Water pressure (3.9″)

Manuals: 84 mm. Water pressure (3.38″)

SCHNITGER'S ORIGINAL DISPOSITION, SUBSEQUENTLY ALTERED BY HIS SONS, AND OTHERS. THE FORTY-NINE NOTE MANUAL AND TWENTY-SEVEN NOTE PEDAL COMPASS IS REFLECTED IN THE NUMBER OF PIPES IN EACH STOP.

When a chord of six voices was struck with a full (plenum) combination, these wind pressures varied as follows:

Rugwerk from c. 60 to 110 mm. (2.36″ — 4.34″)
Positief from c. 60 to 110 mm. (2.36″ — 4.34″)
Borstwerk from c. 75 to 95 mm. (2.93″ — 3.75″)
Hoofdwerk from c. 75 to 90 mm. (2.93″ — 3.5″)
Pedal from c. 80 to 130 mm. (3.1″ — 5.11″)

After restoration of the wind chests and returning the disposition to the original, and placing the chest for the Rugwerk in its original place, a normal installation of the wind conductors was made possible. As with the Rugwerk, regulators were added to the Pedal. Wind pressure variations were thus brought back to their normal proportions; that is, for all normal playing requirments, the wind was steady, although the bellows stand in an unheated space. Therefore, the blowers were connected to an intake pipe, through which only air from a heated space is drawn; thus, intonation variations due to air temperature differences are forestalled as much as possible.

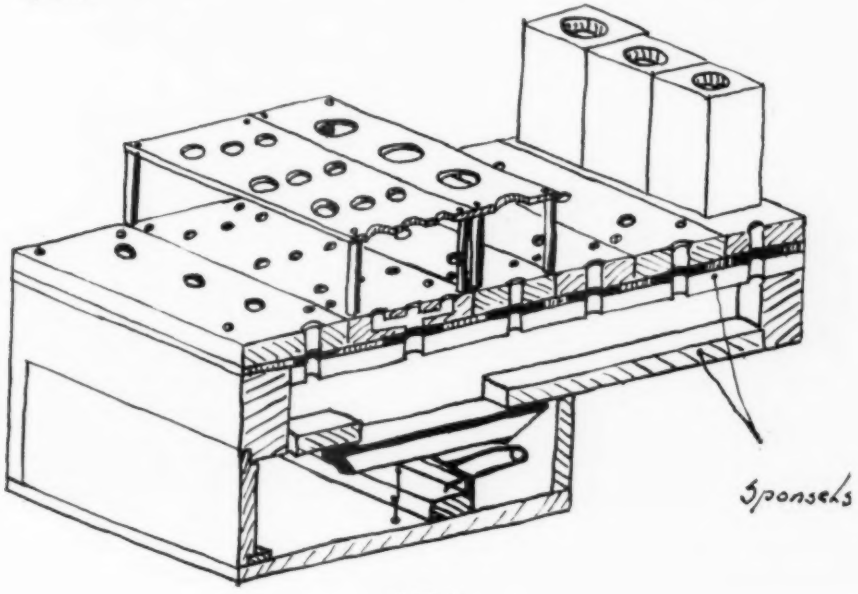
The wind chests were completely dismantled and frames and other parts were newly glued. Valves were replaced by new oak wood. (The original valves were replaced with ones of pine in the first quarter of the present century.)

To the top sides of the chests, a warp-free topboard was added. The old sponsels[4] were removed (wooden strips closing tone channels at top and bottom).

Thanks to these measures, these chests, originally made for an unheated church, can be fully guaranteed for use in a building using hot-air heat, which is now the case at Zwolle.

The removal of the sponsels has, above all, the advantage that the tone channels

[4] Strips of wood inserted in the bottom of the note channels to seal them, "filling-in-pieces"; also strips of wood inserted between table and topboards, separating sliders, "spacers."



FLENTROP ORGAN AT UTRECHT. PEDAL PRINCIPALS ON EITHER SIDE, HAUPTWERK IN LOWER CENTER AND OBERWERK ABOVE.

(space between valve and slider) remain exactly as they originally were. Perhaps this sounds illogical, but this is not the case. For, with the wind chests planed down again, they lose a considerable amount of height. If grids were glued in again, the internal measurments of the tone channels would become smaller than they originally were. The addition of the specially made new topboards assures that the tone channel measurements remain at the original height.

Finally, double spring sliders (according to Flentrop Patent 79150) were added. These double sliders are of a thickness equal to that of the original single-piece wooden sliders. The space in the slider through which the wind passes is exactly like that of the original slider. Because of these precautions, no alterations were made in the wind chests which affect the forming or quality of the tone; at the same time, the sliders are completely airtight and easy to move (to facilitate registration).

Pipe racks and pipe boards were put back in their original shape, so that the pipes of the original disposition could be placed upon them.

Action

Because of the restoration of the wind chests and the disposition, it was again possible to have the valves (pallets) move a normal amount, and thus to return the levers in the action to original condition.

All turning points in the action (where leverage changes direction to go from key to chest) were made to work freely and easily. The rollerboards, which remained in their original state, were retained; provision was made to prevent adverse influence of temperature changes and to make regulation of the action generally unnecessary. A completely new pedal action had to be made, to replace the electric action, which had been added in the present century.

Keyboards

The keys were provided with new ivory and ebony. The original couplers, which had all disappeared, were made again.

Schnitger's specifications did not describe precisely which couplers there were, but the report by the inspectors dated September 30, 1721, tells exactly. It speaks of the following:

1) All four keyboards may be simultaneously connected.
2) The two bottom keyboards may be separately coupled.
3) The two topmost keyboards, in like mananer.
4) Also, these two with the fourth.
5) Also, keyboards 2, 3, and 4 can be coupled together.
6) Also, keyboards 1, 2, and 4 can be coupled together.

Doubtless this sounds rather complicated, but well might it be! Because it is the following couplers which are described above: Drawknob, II - I; pull-couplers (engaged by moving the keyboard a short distance forward or back): II - III, II - IV, III–IV.

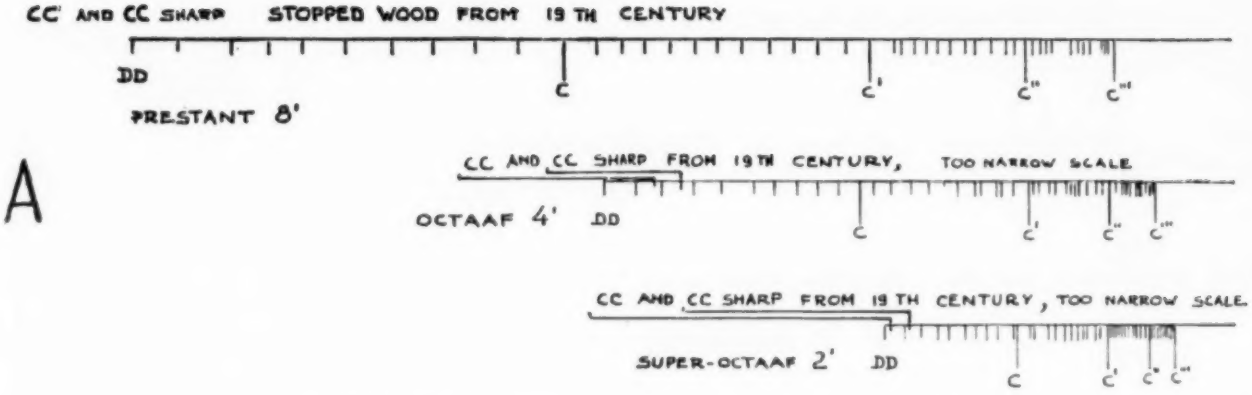
The above listed couplers, in addition to a new Pedal coupler, were connected.

The Pedal keyboard was completely renewed, and made in accordance with normal measurements and placed in its normal position.

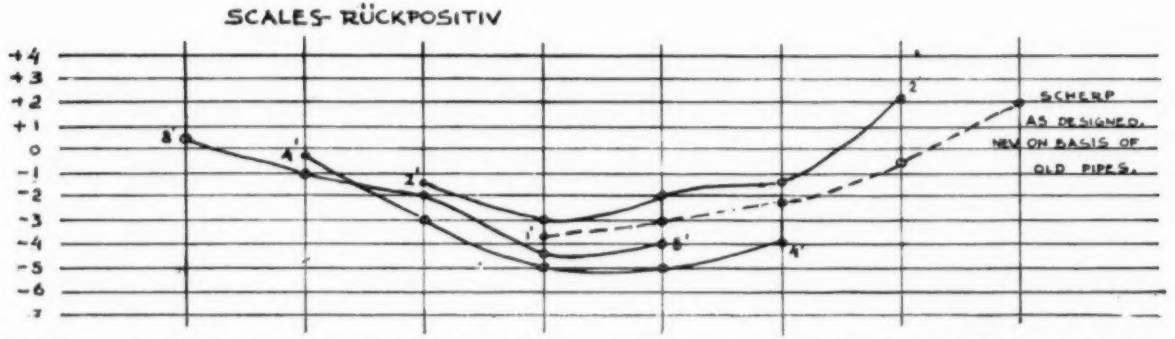
Stop Action

The stop action was completely revised. Because of a careful balancing of the leverage, the notches in the stop knob shanks were done away with. (Formerly these had been needed to lock the stop in the "on" position.) Now it is possible to open

A



B



Scales of rückpositiv principal pipes. Diagram A shows the proportions of the circumferences. [CC stands for 8' C, which we usually indicate by C, using c for 4' c, and CC for 16' C.] Diagram B shows the relationships between these dimensions and those of a set of pipes uniformly halving their circumferences on the sixteenth pipe, represented by the zero line. Each line above or below zero line indicates one or more pipes larger, on the uniform scale, of any particular note in the compound scale.

and shut any of the stop controls without any difficulty. The stop knobs themselves and the inscriptions on them were returned to their original state.

Pipework

Of the flue pipes, especially those in the Prestant ("Principal") group, many complete stops were extant. From the upper work, only the Mixture of the Borstwerk and the Hoofdwerk still existed. For every original stop or pipe, measurements were taken, as is explained in the examples shown for the 8′ Prestant, 4′ Octaaf, and 2′ Superoctaaf for the Rugwerk (see drawing A). From the measurements, it is made abundantly clear that the C and C♯ pipes (made in the nineteenth century) do not fit into the scale diagram. This is for the simple reason that there was no space for pipes of the correct scale.

On the basis of these measurements of original pipes, scale diagrams were drawn (see drawing B). These scale diagrams from the existing original stops were of great help in making scales for the missing stops and in making the pipes for these registers; they were useful in making new pipes to replace missing ones in a stop only partially complete in original form.

Thus, on occasion, a single pipe remaining for the original stop might be of great help, used in conjunction with the scale diagrams made from the completely original registers.[5] This made is possible to decide how the missing original stop would have have been scaled.

Of the reed pipes, practically nothing original existed, except boots and reed blocks from various stops. The data, deduced from these remaining parts together with measurements from original reed pipes in other Schnitger organs, gave satisfactory information to determine the needed scales.

For the construction of the reed pipes, much of the material of the pipes made in the nineteenth century by van Oekelen was used. The existing van Oekelen resonators were slit open and made into completely flat sheets, and new resonators were made from this metal. Since the reed blocks were not original anyway, they were provided with new narrower bores. The reeds and shallots were made entirely new according to original (models) and measurements.

Voicing

After revision of the original pipes, that is, replacing nicked languids with unnicked ones, replacing tuning rolls (which began below the tops of the pipes, rather than at the top, as is normal), among other things, these pipes themselves gave a clear idea of what the original voicing was like. These restored original pipes were used as guidance for the rest of the original pipes as well as for new pipes that had to be made. Thus, personal taste is relegated to the background, because the old, original pipes gave a clear indication of the tonal direction to be followed, after removal of additions or alterations to these pipes. That a conscientious study of other Schnitger organs and experience, among other things, of the restoration of the Alkmaar Schnitger organ, were a great help, goes without saying.

This article can appropiately end with a word of thanks to the Zwolle church officials who made this restoration possible, and the advisors, Dr. Anthon van der Horst, Adrian C. Schuurman, and George Stam, whose cordial cooperation was such a great help toward successful completion of the work.

[5] The words "register" and "stop" are used interchangeably in this article.

SCALE, OF ANY PARTICULAR NOTE IN THE COMPOUND SCALE.

SUMMARY OF UPPERWORK

Mixture of the Borstwerk and the Ruispijp of the Hoofdwerk are original.

Hoofdwerk

Sesquialter II: C 1 1/3′—4/5′; c 2 2/3′—1 3/5′.

Scherp IV: C 1/2′—1/3′—1/4′—1/6′; F♯ 2/3′—1/2′—1/3′—1/4′; c 1′—2/3′—1/2′—1/3′; f♯ 1 1/3′—1′—2/3′—1/2′; c^1 2′—1 1/3′—1′—2/3′; $f♯^1$ 2 2/3′—2′—1 1/3′ 1′; c^2 4′—2 2/3′—2′—1 1/3′.

Cymbel III: C 1/6′—1/8′—1/10′; F 1/5′—1/6′—1/8′; c 1/3′—1/4′—1/5′; f 2/5′—1/3′—1/4′; c′ 2/3′—1/2′—2/5′; f^1 4/5′—2/3′—1/2′; c^2 1 1/3′—1′—4/5′; f^2 1 3/5′—1 1/3′—1′.

Rugwerk

Ruispijp II: C 2′—1 1/3′.

Mixtuur VI: C 1 1/3′—1′—2/3′—1/2′—1/3′; G 2′—1 1/3′—1′—2/3′—1/2′—1/3′; c 2′—1′—1 1/3′—1′—1′—2/3′—1/2′; g 2′—2′—1 1/3′—1′—1′—2/3′; c^1 2 2/3′—2′—2′—1 1/3′—1 1/3′—1′; g^1 4′—2 2/3′—2′—2′—1 1/3′—1 1/3′; c^2 4′—4′—2 2/3′ 2 2/3′—2′—2′.

Cymbel III: C 1/5′—1/6′—1/8′; F 1/4′—1/5′—1/6′; c 2/5′—1/3′—1/4′; f 1/2′—2/5′—1/3′; c^1 4/5′—2/3′—1/2′; f^1 1′—4/5′—2/3′; c^2 1 3/5′—1 1/3′—1′; f^2 2′—1 3/5′—1 1/3′.

Bovenpositief

Tertian II: C 4/5′—2/3′; c 1 3/5′—1 1/3′.

Scherp V: C 2/3′—1/2′—1/3′—1/4′—1/6′; F♯ 1′—2/3′—1/2′—1/3′—1/4′; c 1 1/3′—1′—2/3′—1/2′—1/3′; f♯ 1 1/3′—1′—1′—2/3′—1/2′; c^1 2′—1 1/3′—1′—1′—2/3′; $f♯^1$ 2 2/3′—2′—2′—1 1/3′—1′; c^2 4′—2 2/3′—2′—2′—1 1/3′; $f♯^2$ 4′—4′—2 2/3′—2′—2′.

Borstwerk

Mixtuur III–IV: C 1/2′—1/3′—1/4′; c 1′—2/3′—1/2′; c^1 2′—1 1/3′—1′—2/3′; c^2 2′—2′—2′—1 1/3′—1′; $f♯^2$ 4′—2 2/3′—2′—1 1/3′.

Sesquialter II: C 2/3′—4/5′; c 1 1/3′—4/5; c^1 2 2/3′—1 3/5′.

Pedal

Mixtuur VIII: C 2′—1 1/3′—1′—1′—2/3′—1/2′—1/3; G 2′—1 1/3′—1′—1′—2/3′—2/3′—1/2′—1/2′; c 2 2/3′—2′—2′—1 1/3′—1′—1′—2/3′—2/3′; g 4′—2 2/3—2′—2′—1 1/3′—1′1 1/3′—1′—1′.

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ROY S. CADDY AND HOWARD F. POLLARD

AN OBJECTIVE STUDY OF ORGAN ACTIONS

INTRODUCTION

Considerable interest is being shown at the present time in the question of the relative merits of mechanical and electrical organ actions. To a sensitive ear there is a marked difference in the tones produced by these different actions. Yet few organbuilders seem to be conscious of the effect the action can have on the resulting tone of the pipes. It seems to be believed that every tonal fault can be ironed out by skillful voicing. Recent translations of texts written about Schnitger and Silbermann and by Werckmeister have been published in the ORGAN INSTITUTE QUARTERLY. The famous builders of the "golden age" of organbuilding reveal a firmer grasp of the essentials of organ design, especially on the acoustical side, than is revealed by most contemporary builders.

Some time ago we were approached by a Sydney organbuilder with a request to investigate the essential differences between the sounds produced by mechanical organ action as compared with direct electric action. We were aware of the many conflicting statements dealing with this issue, and the literature on the subject was of little assistance.

A study of available comments made it clear that although many opinions had been expressed few were supported by concrete experimental evidence.

The comments quoted below have been taken from previous issues of the ORGAN INSTITUTE QUARTERLY.

Henry Willis, ORGAN INSTITUTE QUARTERLY. Volume 2, Number 4, Autumn 1952.

"The whole principle of the slider chest is undesirable, one pallet to supply from one stop up to twelve or more with the inevitable robbings that take place which are the tuner's bug bear . . . .

A properly designed and constructed sliderless chest on the pitman system is so greatly superior in every way that there is simply no comparison."

L.I. Phelps, ORGAN INSTITUTE QUARTERLY. Volume 3, Number 1, Winter 1953.

"Pipes speaking on common channels or key chambers, conveying wind to more than one pipe from a single chest valve, were more pliable and sound together in finer cohesion than pipes speaking on independent valve holes."

T.P. Frost, ORGAN INSTITUTE QUARTERLY. Volume 3, Number 2, Spring 1953.

"It is almost a commonplace that pipes made and voiced for a slider chest may lose their beauty and reposeful qualities when placed on a pitman or other individual valve chest. Voicers say the pitman chest makes them 'too quick' . . . .

Simply play any note (on any tracker organ) near the top of a 4′ or 2′ stop, staccato, and notice how it seems to blossom out at the start and to relax at the end of its speech. The usual rigid screech of trebles on pitman chests is very different . . . .

One advantage of the slider chest over any other is the perfect simultaneity of winding the pipes in the slider chest. This obviously promotes good blending . . . .

Slider chests are accused of causing 'robbing' between pipes. This does not occur in chests with adequate channels."

J. Challis, ORGAN INSTITUTE QUARTERLY. Volume 3, Number 3, Summer 1953.

"The seventeenth- and eighteenth-century organbuilders . . . knew that an accent at the beginning of the tone is an absolute necessity for all musical instruments and that some control of the amount of accent is essential. A directly operated pallet under very low wind pressure made it possible to control the amount of accent merely by how fast one pushed the key down. They also knew that low pressure in a common wind channel, free from obstruction, would attain this blending."

G.D. Harrison, ORGAN INSTITUTE QUARTELY. Volume 3, Number 3, Summer 1953.

"It is asserted that direct mechanical action gives the player more intimate personal control of the instrument. This is at least in part psychological and is due to the player's close proximity to the pipes.

It is said that the player can influence the attack, that is, the rapidity with which the tone develops in the pipe, by controlling the velocity of key decent. This is pure illusion . . . .

It is my feeling that the disadvantages of the old type of mechanism far outweigh any of its advantages, be they real or imaginary, and that such acknowledged virtues as it does possess can all be duplicated with electropneumatic action."

THE ORGAN ACTION

The pipe organ is a musical instrument that has been in process of development for at least two thousand years. By the beginning of the eighteenth century organ pipe tone had reached a high state of development. Many musicians consider that this state has not been surpassed since. Greater flexibility of control was achieved by the introduction of electrically operated mechanism during the nineteenth century. Probably as a result of preoccupation with the development of this new means of control and the desire to build more powerful instruments, tonal aspects of design suffered a relapse. As a consequence, the organ became a peculiarity among musical instruments; it was larger and louder but its tonal characteristics were unlike other instruments. It is only in recent years that interest has again been kindled in the problem of designing organs that have a satisfactory musical sound, whatever other virtues they may possess.

The organ action, whatever type and however complicated, consists essentially of (1) a wind supply, (2) a pallet or valve, (3) the pipe. Generally there are four types of pallet control:

A. Mechanical
B. Direct electrical
C. Pneumatic
D. Electropneumatic

In addition, there are generally three ways of admitting air into a given pipe:

a. Directly from the pallet into the foot of the pipe.
b. Indirectly through a long channel or key chamber.
c. Indirectly through an "expansion box."

Any combination of these alternatives is possible but the most common are Ab, Ba, or Da. Musicians generally express a preference for the tones produced from system Ab, that is a mechanically controlled slider chest. Organbuilders generally prefer some form of electrical control. The system Ba is often used in smaller instruments, while system Da is commonly used in larger instruments.

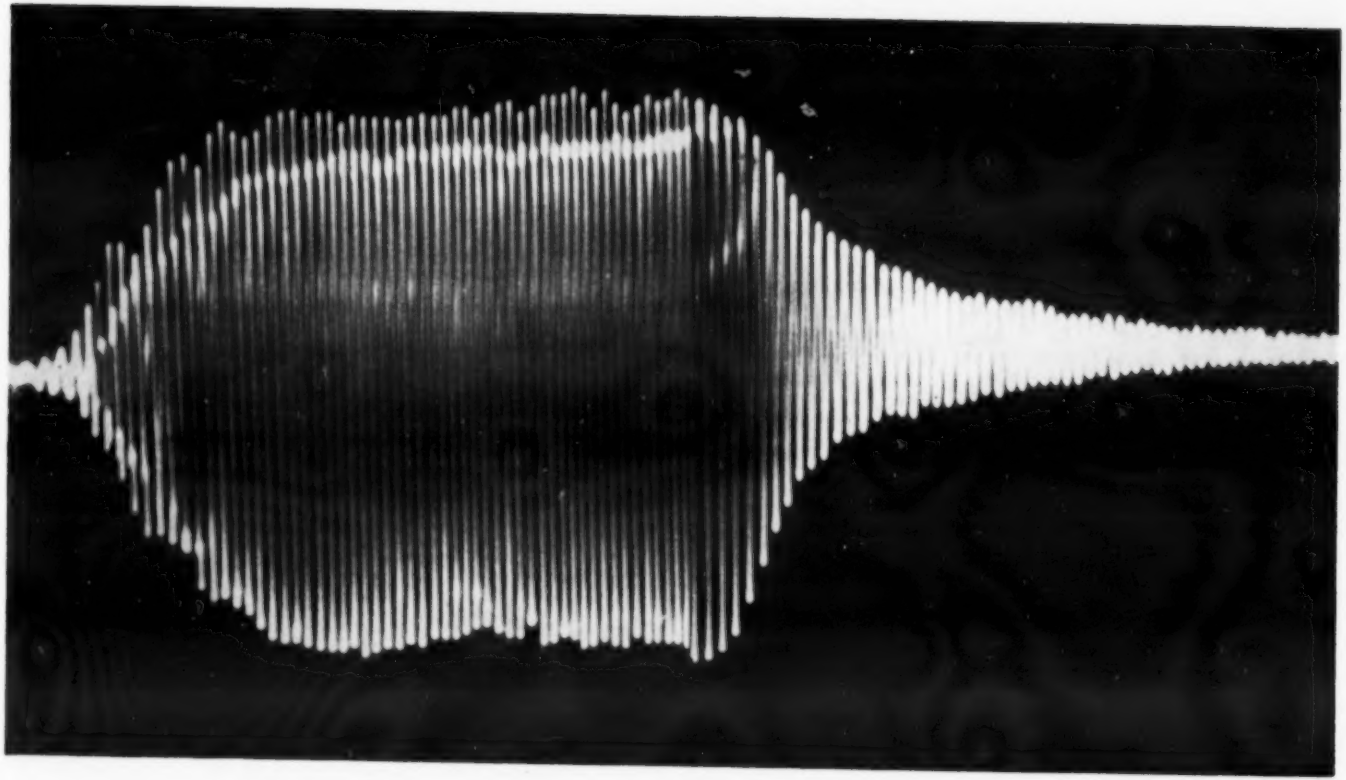

FIGURE 1

THE THREE PARTS OF A COMPLETE ORGAN TONE — OPENING TRANSIENT, STEADY STATE, CLOSING TRANSIENT.

Experimental Details

In our work we confined our attention to a single pipe, a 1′ metal Principal which was un-nicked and voiced professionally for a pressure of 1½ inches measured on a water gauge. In order to compare the results obtained by operating this pipe by mechanical action and by direct electric action, two identical key chambers, each 18 inches long by 2½ inches deep and ⅞ inch wide were constructed. The purpose of the second key chamber will be discussed later. Air was admitted to one chamber through a pallet 7 inches long and ⅞ inch wide, and to the other by means of a standard electric relay. Auxiliary apparatus allowed the pipe to be operated directly from an electric relay.

The sound from the pipe mouth was picked up by a microphone and recorded by photographing the pattern produced on the screen of a cathode-ray oscilloscope.

Most musical notes consists of three distinct parts, all of which have a marked effect on the reaction of the ear to the note. These parts are (1) the starting transient (or attack), (2) the more or less steady tone, (3) the closing transient (or decay). Figure 1 shows the three parts of a complete note produced in an organ pipe with mechanical action.

The steady tone predominates in sustained passages but at other times the nature of the starting transient plays an important role. It is this transient which is the first part of the sound to reach the ear. There is evidence to suggest that our ability to recognize different qualities of sound depends more on the nature of the starting transient than on the steady tone. If this transient is too abrupt, the ear rejects the sound as being unmusical. This was the case with some of the early electronic organs. However, if the starting transient is relatively gradual the ear considers the sound to be more acceptable.

In the same way, the closing transient or decay of the note must be gradual to be accepted by the ear. Of course, if either transient is too gradual, we reject the note as being too slow in "speech." There is much work that needs to be done in elucidating the proper function of these transients. This is especially the case with the organ where the transients of the early instruments are different from those of modern examples, with musicians generally favoring the earlier type of sound.

Superficially it would appear that there should be no difference in the starting transient of an organ pipe whether it is blown by mechanical or electrical means. The ear, however, can detect a marked difference. This is shown in the two photographs (Figures 2 and 3). An examination of this problem reveals that there are two distinct factors that influence the result. The first is the difference in the rates of opening of the pallets, and the second is the presence of the key chamber in the mechanical action.

Measurements were made in each case of the time required by the pallet to open a sufficient distance to allow full blowing pressure to be maintained at the foot of the pipe. The electrically operated pallet produced full pressure in 1/100 second. This time is independent of the speed with which the key is depressed, as one would expect with electrical action. On the other hand, the time taken for the mechanically operated pallet to open sufficiently may be controlled by the player. When operated as in normal fast playing, the time taken to produce full pressure is 1/50 second, which drops to about 1/20 second with slower operation. It was now decided to see if results similar to the mechanical action could be obtained from the electrical action when the pallet was hand-controlled by means of a cord.

A sharp tug on the cord attached to the electric relay gave results typical of the electric action, the results using a slower pull corresponded to the mechanical action. It follows then that the rate of opening of the pallet is a controlling factor in the production of the opening transient. The slower rate of opening, and hence the slower buildup of pressure in the pipe, leads to a more acceptable opening transient and an uncomplicated buildup of steady tone. Sudden application of pressure seems to shock-excite the pipe, which then readily overblows initially. This leads to some delay before the pipe settles down to its steady tone. Such a process seems to be the origin of criticisms of pipes sounded on direct electric action which are often stated to start with a "gulp" and to be "slow in speech."

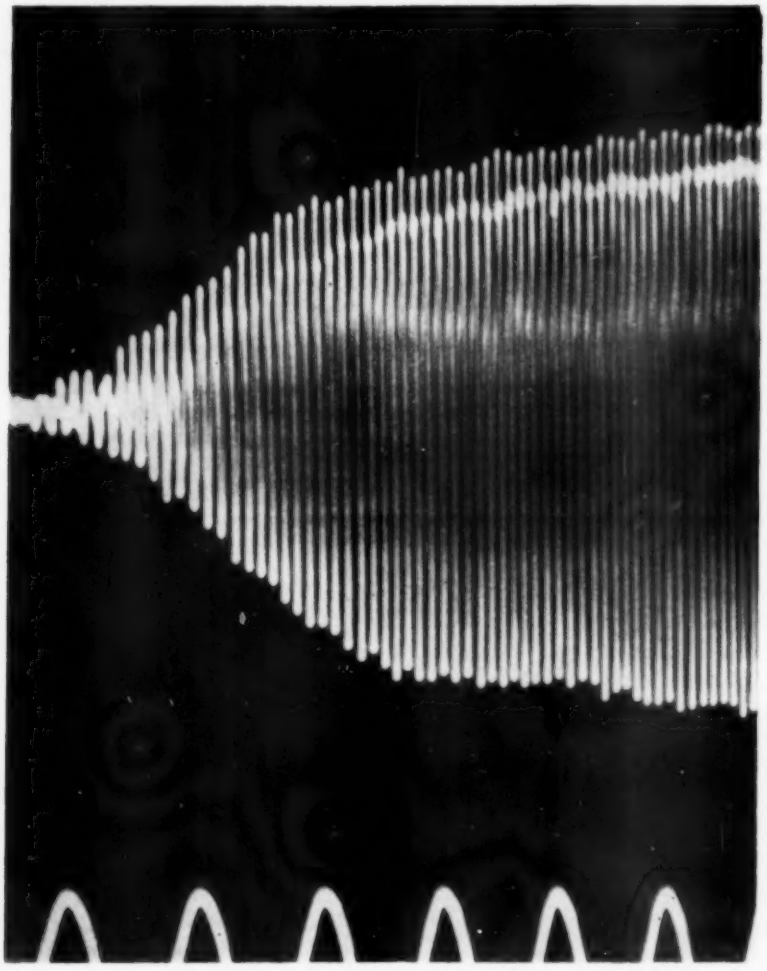

FIGURE 2A

OPENING TRANSIENT WITH MECHANICAL ACTION, KEY DEPRESSED SLOWLY. TIME MARKS BELOW ARE 1/50 SECOND APART.

Acoustical Circuits

In recent years, a great deal of progress in acoustical problems has been made possible by the use of the following technique. The various parts of the acoustical problem can be arranged into the form of a circuit. An analogous electrical circuit can now be drawn with, for example, the air flow corresponding to electrical current, constrictions in the air path corresponding to electrical resistance, and so on.

For instance, a blower supplying air to a pallet with an opening into which a pipe may be fitted has an electrical analogue as follows. The blower is represented by a battery, the pallet by a switch and the opening by a resistance, all connected in series. We can see immediately that the value of the resistance will control the current that flows in the circuit, that is, the size of the opening will control the rate of air flow.

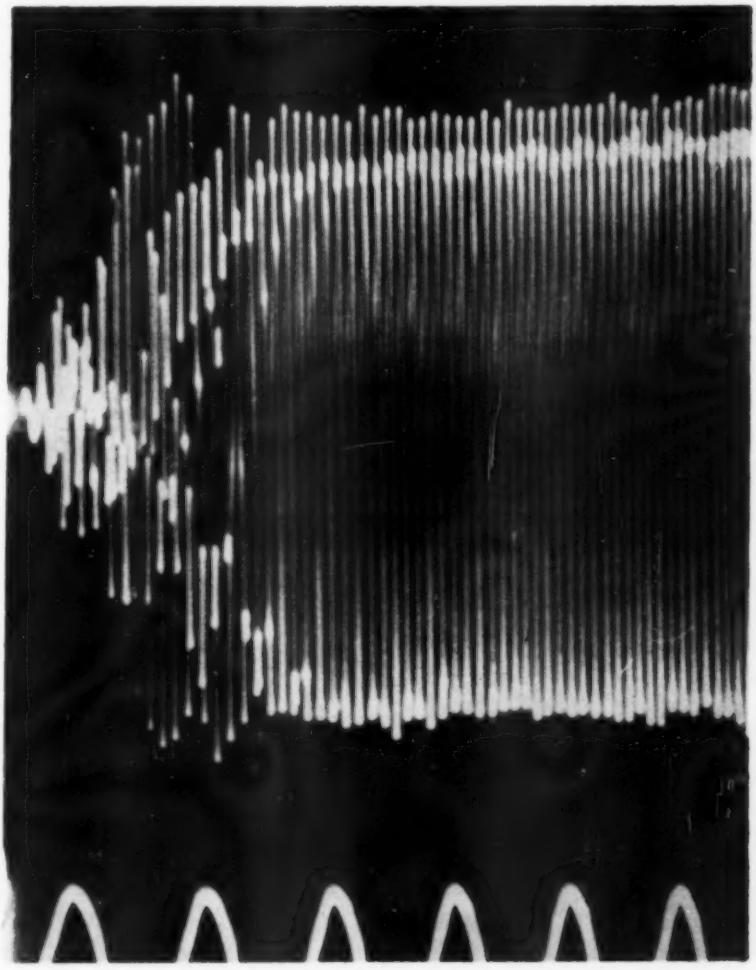

Figure 2B

Opening transient with mechanical action, key rapidly depressed. Time marks below are 1/50 second apart.

We have applied this technique to organ actions* and from the analogous electrical circuits many interesting deductions may be made.

Deductions from Analogous Circuits

1. One startling deduction is that the key chamber, if of adequate dimensions, should have practically no effect on the starting transient. This was verified by operating the second key chamber with the electric pallet. The results obtained were almost identical with those obtained when the pipe was placed directly above the electric pallet. This experiment and the previous one lead us to the conclusion that the starting transient is controlled only by the rate of opening of the pallet.

*The technical aspects of this are discussed in detail in a paper by the authors to be publised in Acustica.

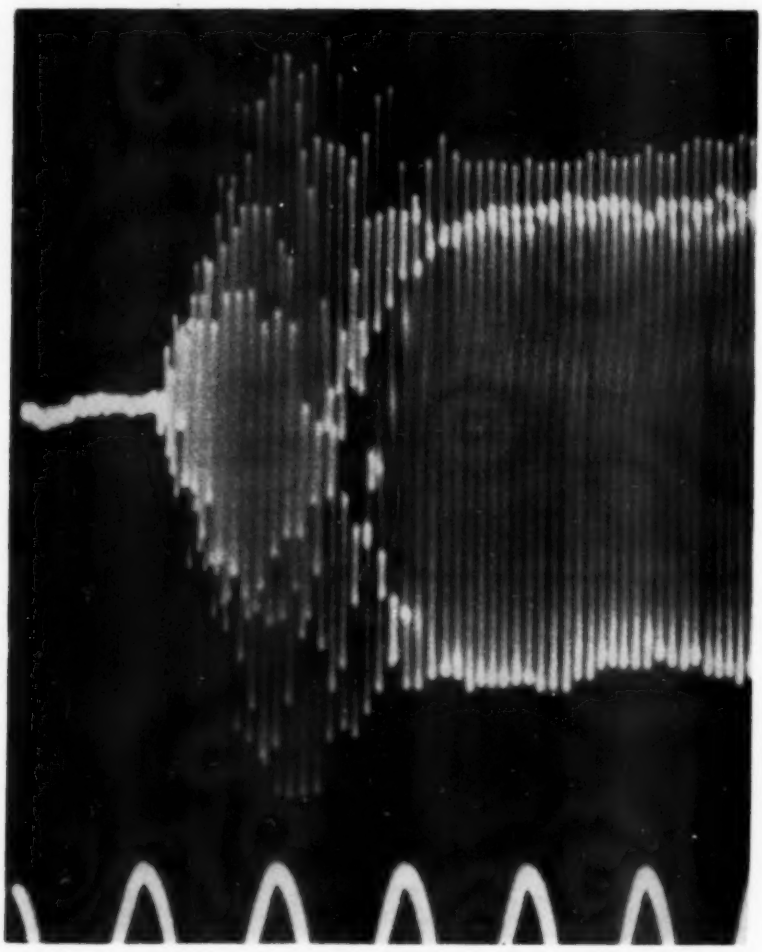

Figure 3.

Opening transient with direct electric action. The timing marks below the photograph are 1/50 second apart.

2. Concerning the steady tone of the pipe, the analogous electrical circuit predicts that the type of action should make no difference to the quality of the sound produced. This was verified by means of a wave analyzer and is confirmed by the results of listening tests conducted by Noehren and described in the ORGAN INSTITUTE QUARTERLY, Volume 4, Number 2, 1954.

3. What then is the function of the key chamber? The electrical analogue analysis indicates that it has a controlling effect only on the closing transient. The electric action, operating directly into the pipe, shut off the air supply rapidly, causing the sound to have a sharp cutoff. This is often extended spuriously because of the effect of "pallet bounce" which is nearly always present in direct systems. Musicians consider this effect objectionable.

In the case of the key chamber, there is a large volume of higher pressure air trapped when the pallet closes, which must exhaust through the pipe. This leads to an extended decay time, giving the more favorable "rounded tone." The decay depends on the number of pipes sounding, the more pipes the faster the decay. In some chests an additional leak hole is provided to avoid the dceay being too extended. Our arguments assume that all pallets are fitting as any air leaks will obviously alter the situation.

EXPANSION BOXES

Some builders fit expansion boxes between the pallet and the pipe in an endeavor to improve the "attack." It has been suggested that the function of an expansion box is to reduce turbulence in the wind stream. There seems to be a widely held view that in the ideal organ action the air flow would be streamline. Measurements show that in an organ pipe the conditions are such that the air flow must be turbulent. To achieve streamline flow in the organ action would require either very narrow channels with smooth walls or a very low pressure together with no sudden changes in air flow direction. In any practical organ the channels are too large for this state, besides which there are many sudden changes of cross section, directions of air flows, and various rough edges. It follows, then, that the airflow throughout an organ is most likely to be turbulent.

The effect of the expansion box may be explained by applying the appropriate electrical analogue. This shows that the sudden pressure rise which normally causes "gulping" will be rounded off slightly. This is due to the combined effect of the volume of air in the box and the constricted opening through which the air enters. Thus the pressure rise will be more akin to the action of the mechanical pallet. An interesting prediction from this theory is that a similar effect should be obtained from a pipe with a small foothole, narrow flue, and large volume of air in the foot.

CHARACTERISTICS OF AN IDEAL INSTRUMENT

It is interesting to consider some of the characteristics that organists from time to time claim to be desirable in a pipe organ.

1. The sounds from the pipes should possess a musically acceptable opening transient or attack and a smooth decay.

2. The player should be able to exercise some control over the opening transient.

3. All pipes belonging to one note should blend well when sounding in any combination.

4. The keys should have "top resistance" as is present in mechanical action.

5. Except in the smallest instruments the console should be detachable and capable of incorporating combination pistons, et cetera.

The question now arises, Can all these characteristics be included in the one instrument? In terms of existing mechanisms, the answer is no. A well-made mechanical system with slider chest could include points 1, 2, 3, 4. The usual tracker organ with Barker lever includes points 1, 3, 4. An electropneumatic system with pitman chest usually provides only 4 and 5 but may include 3. Point 1 is usually unsatisfactory but may be improved by slowing down the speed of operation of the pallet. An electropneumatic pitman system with expansion boxes could provide 1, 3, 4, 5, as would similarly be available with an electopneumatic slider chest system.

Conclusion

The various conflicting statements quoted in the introduction can be resolved by the application of modern acoustical techniques. It is found that the type of organ action has a distinct effect on the quality of the sounds produced. We may divide each sound into its three constituent parts: the opening transient or attack, the steady tone, and the closing transient or decay.

We find that the mechanical action provides an acceptable start to the note and also allows control of the attack, which is lacking in other types of action. Low wind pressures directly assist this control. Direct electric action is too rapid and results in an unacceptable start to the note.

We have confirmed the observations of Noehren that once the steady tone is established the type of action has no effect on the quality of the sound. As for the decay of the sound there must be a key chamber or expansion box in order to give the decay the desired "rounded" tone.

It appears that if we desire to have a musical organ tone we must take full account of the principles employed by the old master builders. Provided these are not violated there is no reason why modern materials and controls could not be incorporated.

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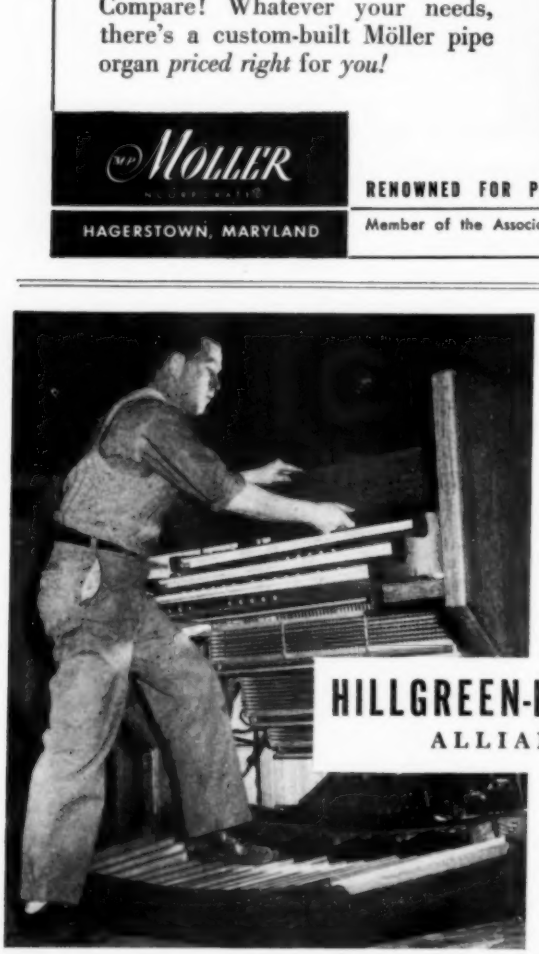

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HOMER G. MOWE

THE SINGING OF THE CHOIR

I have always been pleased with the unique heading devised by the Director of the Organ Institute for the section of the Quarterly devoted to singing. His employment of the phrase, "A Joyful Noise," seems to me particularly apt, proper, and of basic significance. Like most Biblical quotations it has several interpretations, one of which refers directly to the use of voice in singing.

When we hear singing we think of the words; the melody and the harmonies affect us; and the voice of the singer arouses a favorable or unfavorable emotion in us. The voice itself is a most important factor in this because we may like a song as sung by one singer and not like it when sung by another, even assuming that the musicianship and gifts of interpretation are equal. The sound of the voice—the "noise"—has a marked effect on us.

The basis of voice is this sound, the "noise," made when the vocal organs function, and any human voice is capable of a great variety of "noises." This fact can be observed in anyone, singer or nonsinger.

The organist-choir director has experienced this wide variation in the voices of his or her singers, especially when dealing with a choir of untrained or slightly trained voices. What a variety of tones can issue from the throats of the members of an average choir! Every quality from shrillness to hollowness; strident loudness to breathiness; and nasality to dullness.

Every organist-director has wished that he or she could in some way bring a pleasing quality to all these voices, thereby enabling them to express the full beauty of the music the director admires and selects for performance. Can this be done and, if so, how?

The general public may believe that a person is "born" with a good voice or else can never hope to acquire one. Any teacher of singing, however, who understands the vocal instrument and its functioning, knows that a good quality can be brought into any voice and objectionable qualities removed thereby. It is a part of the teacher's daily work.

A voice that is breathy, shrill, hollow, strident, weak, nasal, or dull in quality sounds that way because of the manner in which it is produced, and not because Nature made it that way. Therefore, if the manner of use is changed, the sound of the voice changes. If the functioning of the voice follows the principles that govern the proper use of voice, the tone will be pleasing and expressive.

The means of accomplishing this change, the "how," are called methods, procedures or devices. They are a means to an end and their effectiveness, generally, is in direct relationship to and alignment with the before-mentioned principles. In an article published in the Summer 1954 issue of the ORGAN INSTITUTE QUARTERLY, I outlined these fundamental principles. They can be learned by any organist interested in improving the singing of his or her choir and can be applied successfully.

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The organist-choir director and the teacher of singing alike deal with voices, the former as one of his many duties and the latter as his main occupation. Both groups have a responsibility for the vocal welfare of the singers under their charge and direction. This common interest and responsibility indicates the desirability of closer cooperation between the two groups.

The Director of the Organ Institute has had the vision to see this fact and the initiative to act. My class in Voice Fundamentals for Organists has been a part of the Institute's curriculum since 1954. At that time, at his request, I planned a course which would give those attending the sessions, in three weeks of daily lessons, a knowledge of vocal principles and an equipment of methods and procedures that would enable them to deal with the singers in their choirs and improve each individual voice. A number of those who have taken the course have been successful in applying what they learned. As an incidental benefit, the organists in the class greatly improved their own voices and their singing, so that they could more successfully illustrate what results they wanted to achieve in the singing of their choirs.

The value of cooperation between the organist-choirmaster and the teacher of singing is emphasized by an editorial appearing in the July 1957 issue of the American Guild of Organists Quarterly. It points out that "anyone charged with the responsibility of directing ensemble singing should be sufficiently well equipped through knowledge of and experience with vocal functioning to demonstrate the correct and/or incorrect manner of singing, and to be able to classify, with consistency, individual voices." Further that "the organist-choirmaster should also know how much pressure, in the demand for fortissimo and pianissimo singing, should be placed on young and often immature voices without damage to the vocal instrument," and should exercise judgment also "as to the reasonable length of rehearsals." The editorial ends by saying that the "American Guild of Organists, with its high standards of all-round competence for its members throughout the country, is in a strategic position to stress the foregoing vital factor in church musical life."

The Organ Institute deserves special praise for its pioneer work in adding to its outstanding curriculum this supplementary course in Voice Fundamentals that can be of such practical value to any organist-choirmaster.

(NOTE.–The American Academy of Singing has just published a pronouncement entitled "Classification of the Singing Voice." Copies are available on application to the writer, care of the Organ Institute, Andover, Mass.)

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Since the days of the Weimar virtuoso himself, there has probably been no organist better qualified to record this literature. There are gifted performers of incredible virtuosity, artists of uncompromising integrity, and musicians devoted to the finest in the literature. Weinrich is all of these. Two decades ago his Bach recordings were the best available. Small wonder if the same is true again today.

The organ used for the recording is a three-manual tracker instrument of fifty ranks, in the Varfrukyrka, Skänninge, Sweden. Dating in part to the late eighteenth or early nineteenth century, it was reconstructed and greatly enlarged by Marcussen in 1939. Standing high on the rear wall of the large stone church, it affords in profusion the colorful, transparent qualities most suited to this music. The precise, unforced yet articulated speech of the pipes is ideal for the delineation of the polyphonic lines.

Weinrich's sensitive and adroit mastery of the organ is exemplified in the registrations, which are given in complete detail in the excellent accompanying booklet. Stops are used singly or in small groupings—always the fewest possible to create the desired effect, and seldom two of the same pitch together. There is no artless resorting to "full organ" with all stops drawn. The swell pedal is not employed, nor is there any change of registration during a chorale. The tremolo is used sparingly, normally on a solo line only. (This legitimate coloring will surprise some who may not be aware that Bach's organs were equipped with tremolos, or that Sebastian Bach himself is known to have ordered the repair of a defective tremolo.)

The chorale registrations may roughly be grouped in three classes. The first includes those with solo melodies, which are most often carried by a reed (as in the plaintive "Ich ruf' zu dir," Krumhorn and tremulant) or by a mutation (as in the impassioned "O Mensch, bewein dein' Sünde gross," 8′ Röfflöjt and Sesquialtera). The most elaborate example of this class is "O Lamm Gottes, unschuldig," in which the canon at the fifth between tenor and alto is played by the left hand on the Hauptwerk Trumpet and Rückpositiv Krumhorn. The second class is the chorales registrated for *organo pleno*, such as "Christ lag in Todesbanden" (Rückpositiv 8′ Principal, 4′ Octave, 2′ Gemshorn, Scharf). Finally, there are the chorales employing small combinations. Typical of these is the tender "Jesu mein Freude" (Brustwerk 8′ Gedeckt, 4′ Quintadena.)

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or eight of the Orgelbüchlein chorales, how those few would be treasured! How much more should the forty-five individual masterpieces of this monumental collection be prized. The present thoroughly satisfactory recording is one every serious organist should want to study, enjoy, and cherish.

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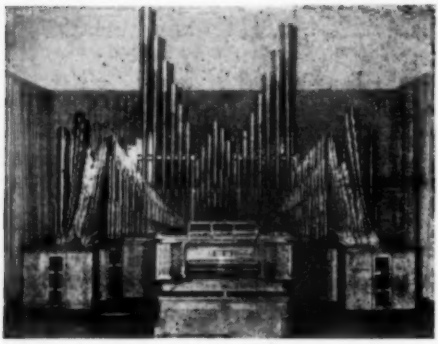

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* * EDITORIAL

ONE OF THE GREATEST ACHIEVEMENTS of modern organbuilding was the restoration of the great organ at Alkmaar by D. A. Flentrop, the noted Dutch artist organbuilder. Since the completion of the work this instrument has had perhaps more influence than any other single factor in reestablishing the principles of good organbuilding and justifying them in the performance of organ music. It is particularly gratifying, therefore, to know that the restoration of another Schnitger organ was entrusted to Mr. Flentrop.

Like the Alkmaar organ the Zwolle instrument was completed by Arp Schnitger's sons, but represented his art faithfully. Having undergone various repairs, additions, and alterations, it is a singular piece of good fortune that the persons presently responsible for this instrument possessed the wisdom and good judgment that led them to engage Mr. Flentrop for a complete restoration. The account of this operation which he has given us (with the assistance, as translator, of John Fesperman, well known in the American organ profession)is full of interesting and valuable information about this organ, which may well prove to be useful to organbuilders and organists in the United States. It is especially gratifying to us to be able publish it in the ORGAN INSTITUTE QUARTERLY.

FROM AUSTRALIA WE HAVE RECEIVED one of the most interesting articles to be published in the ORGAN INSTITUTE QUARTERLY. Messrs. Roy S. Caddy and Howard F. Pollard are both physicists in the New South Wales University of Technology. Their research activities are in the the field of acoustics with special reference to musical acoustics. The specialized interests of Mr. Caddy in electronic aspects of acoustics combined with the ac-

BRIEFS ★ ★ ★

tivities of Mr. Pollard as a practicing organist have materially helped in conducting their researches.

By their own inclination and the interest of their friends in the organ profession they were led to conduct scientific experiments to determine the truth about the effects on speech and tone of organ pipes produced by different kinds of actions. The description of these experiments and their conclusions based upon them are published in this issue and constitute a strong refutation of material on this subject recently published in other music journals. Although everyone who writes on this subject quotes science and mathematics to prove his argument, we are inclined to place our confidence in the scientific attitude and procedures of Messrs. Caddy and Pollard because they seem to have begun with a desire to ascertain the truth, while others have apparently begun with the purpose of demonstrating the truth of a previously conceived theory. This article, entirely unsolicited, is most timely in consideration of the discussions of this matter that are now widespread in the American organ profession.

THE CONCERT PROGRAMS OF THE ORGAN Festival reflect organists' predilection for the Baroque and modern periods, as is usual in Organ Institute concerts. It is regrettable that the great composers of the nineteenth century neglected the organ. However, Liszt, Franck, and Brahms are well represented, and we are glad that this once again demonstrates that the Organ Institute is attempting to develop interest in music of all periods and schools. There was a time when our interest in Baroque masterpieces and contemporary works induced others whose

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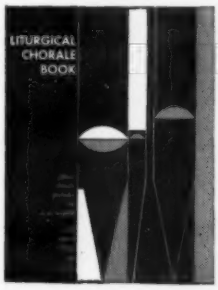

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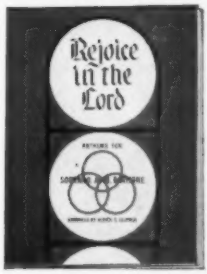

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interests were less inclusive to label us "specialists," although it was not always clear whether we were considered to be specialists in Baroque or in modern music. In the perspective of 1957 it is easy to see that these critics were themselves specialists in the organ music of the nineteenth and early twentieth centuries, much of which was inferior.

The organization of these programs has been difficult because many of the artists wanted to play the same pieces, and we hoped to avoid frequent repetitions. It may be of interest to readers to know that on the originally submitted programs, many of which have undergone several changes, the most popular work was the Buxtehude Prelude, Fugue, and Chaconne. Next in order of popularity, successively, the Messiaen Outburst of Joy and God Among Us, the Bach Prelude and Fugue in E flat, and Hindemith Sonata I. All of these artists have attended at least one summer session of the Organ Institute and have participated in studies of the Baroque literature. These studies have never failed to induce an enthusiastic response. It is therefore something of a surprise to find a comparatively narrow coverage of this literature in the Festival programs. Correspondence with the artists shows clearly that, although they are deeply intrested in these great masterpieces, the organs on which they are obliged to play in their colleges and churches lack the tonal resources necessary for the adequate presentation of this great music, so that they are unable to include them in their most frequently used programs. It is regrettable that so many of our American organs, good as they are in many respects, should be inadequate for the performance of the greatest body of music for the organ.

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The Organ Institute is a nonprofit corporation whose purpose is the advancement of the organ and organ music. Among its principal activities are the summer sessions for advanced study at Andover, which are attended by organists from all parts of the the world. The artists participating in the Organ Festival have attended these summer sessions.

The Organ Institute also publishes in the ORGAN INSTITUTE QUARTERLY articles of professional and general musical interest by leading American and European authorities (annual subscription $2), and a yearly engagement calendar, Organs of the World, with fifty-two finely reproduced photographs of unusual organ cases, consoles, and church interiors.

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